

**PHASE II
ENVIRONMENTAL SERVICES
REPORT**

Broad Street Parkway
Nashua, New Hampshire

Volume II – Appendices



GEI Consultants, Inc.

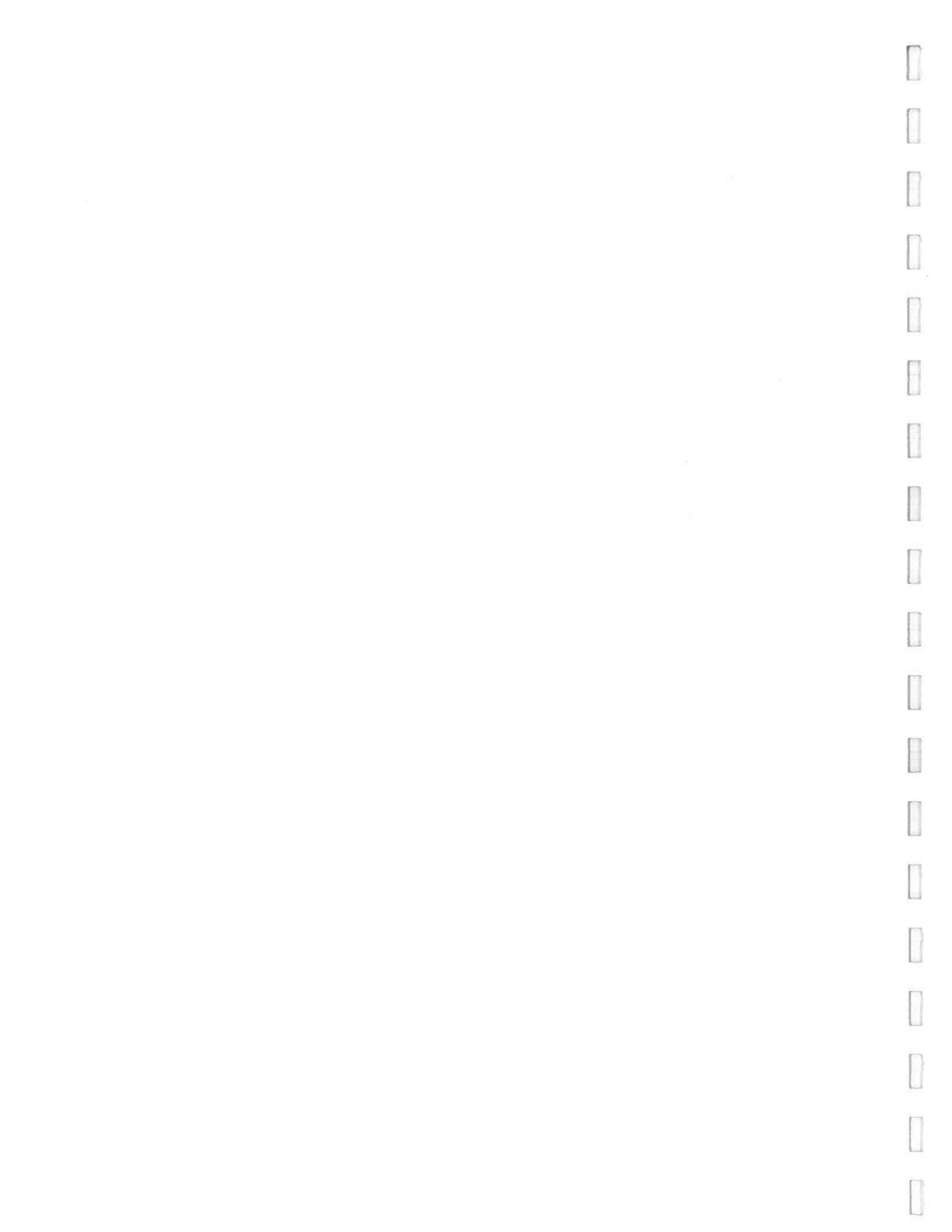
53 Regional Drive
Concord, NH
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SUBMITTED TO

Fay, Spofford & Thorndike, Inc.

288 South River Road
Bedford, New Hampshire 03110

April 2002
GEI Project Number 98217 1PH



Appendix A
Boring Logs

BORING LOCATION		504+16 N 16		DATE START - FINISH		11/13/98-11/13/98		B1	
GROUND ELEVATION		174.6		DATUM		NGVD		DRILLED BY	
GROUND WATER EL.				DATE				LOGGED BY	
								TOTAL DEPTH	
								(Ft.) 6.4	
								Page 1 of 1	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0.4					ASPHALT		ASPHALT	
	S1	29-38 66-33	2	1.9	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 20% sub-rounded to angular fine gravel, <5% non-plastic fines, brown with black, FILL.		FILL	
2.4								
	S2	13-7 5-6	2	1.3	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, orange-brown.		SAND	
4.4								
5	S3	6-7 8-8	2	1.5	SAND (SW) Widely graded. Mostly fine to coarse sand, <5% non-plastic fines, brown.			
6.4								
					Bottom of Boring 6.4'			
10								
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER		Notes: Continuous spoons driven	
WOR-WEIGHT OF RODS			
PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL			
REC-LENGTH OF RECOVERED SAMPLE			
RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, %			
S-SPLIT SPOON SAMPLE	Sv-TORVANEQp-PENETROMETER		
U-UNDISTURBED SAMPLE	V GROUND WATER		
Broad Street Parkway		Φ GEI Consultants, Inc. Project 98217	

BORING LOCATION <u>506+09 N 40</u>				DATE START - FINISH <u>11/13/98-11/13/98</u>				B2	
GROUND ELEVATION <u>174.8</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>				Page 1 of 1	
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>					
				TOTAL DEPTH (Ft.) <u>6.4</u>					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.				
0.4	S1 S2 S3	46-31 20-12	2	1.0	ASPHALT 0.4'		ASPHALT	
2.4		5-5 4-4	2	1.1	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 20% sub-rounded to angular gravel, <5% non-plastic fines, brown, FILL.		FILL	
4.4 5		3-2 2-2	2	1.3	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown to black, FILL..			
6.4					6.4'			
					Bottom of Boring 6.4'			
10								
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Continuous spoons driven <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION		508+12 N 120		DATE START - FINISH		11/13/98-11/13/98		B3	
GROUND ELEVATION		173.1		DATUM		NGVD		DRILLED BY	
GROUND WATER EL.				DATE				LOGGED BY	
								TOTAL DEPTH (Ft.)	
								6.4	
								Page 1 of 1	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0.4	S1	11-11 9-8	2	1.1	ASPHALT SAND (SP) Narrowly graded. Mostly fine to medium sand, 10% sub-rounded fine gravel, <5% non-plastic fines, brown, FILL.		ASPHALT FILL	
2.4	S2	5-5 7-5	2	1.0	SAND (SP) Narrowly graded. Mostly fine to medium sand, 5% rounded fine gravel, <5% non-plastic fines, brown.		SAND	
4.4 5	S3	8-8 7-6	2	1.6	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown.			
6.4					Bottom of Boring 6.4'			
10								
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A
 2.0 IN. OD SPLIT SPOON SAMPLER
 WOR-WEIGHT OF RODS
 WOH-WEIGHT OF RODS AND HAMMER
 PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 REC-LENGTH OF RECOVERED SAMPLE
 RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, %
 S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER
 U-UNDISTURBED SAMPLE V GROUND WATER

Notes: Continuous spoons driven

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BORING LOCATION <u>508+06 N 7</u>						DATE START - FINISH <u>11/13/98-11/13/98</u>		B4	
GROUND ELEVATION <u>174.8</u> DATUM <u>NGVD</u>						DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. _____ DATE _____						LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>6.4</u>	Page 1 of 1
DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks	
	TYPE & NO.	BLOWS / 6 IN.	PEN #	REC ft.					
0.4	S1	12-18 15-14	2	1.0	ASPHALT Upper 0.4' - SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 20% gravel and cement, <5% non-plastic fines, brown, FILL.		ASPHALT		
2.4	S2	4-7 8-7	2	0	Lower 0.6' - SAND (SP) Narrowly graded. Mostly fine to medium sand, 5% sub-rounded fine gravel, <5% non- plastic fines, brown, FILL.		FILL	S2 no sample	
4.4 5	S3	6-6 4-5	2	0.6	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 30% sub-angular gravel and cement, <5% non-plastic fines, brown, roots, FILL.				
6.4					Bottom of Boring 6.4'				
10									
15									
20									
25									
30									
BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER						Notes:Continuous spoons driven			
						Broad Street Parkway		Φ GEI Consultants, Inc. Project 98217	

BORING LOCATION: Sta 510+20 38N
GROUND ELEV. (NGVD): 170.6'
START / FINISH DATE: 02/27/01
GW DEPTH / ELEV.: Not Encountered
GW DATE / TIME: Not Encountered

TOTAL DEPTH: 22'
SOIL BORING: 22'
ROCK CORE: 0'
DRILLED BY: MTB
LOGGED BY: ALS

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN O.D. SPLIT SPOON SAMPLER


NM - NOT MEASURED

PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL


REC - RECOVERY LENGTH OF SAMPLE

RQD - LENGTH OF SOUND CORES > 4 IN. / LENGTH CORED, (%)

S - SPLIT SPOON SAMPLE

A - AUGER SAMPLE  - MEASURED GWL

U - UNDISTURBED SAMPLE

UF - UNDISTURBED SAMPLE, FIXED PISTON  - ESTIMATED GWL

UO - UNDISTURBED SAMPLE, OSTERBERG

NOTES:

[illegible]

BORING LOCATION <u>713+94 S 23</u>		DATE START - FINISH <u>11/13/98-11/13/98</u>		B13	
GROUND ELEVATION <u>172.9</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. _____ DATE _____		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>6.0</u>	
Page 1 of 1					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
	S1	2-3 2-3	2	1.3	Upper 1.2' - TOPSOIL Lower 0.1' - SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown		TOPSOIL	
	S2	1-3 3-3	2	1.5	SAND (SP) Narrowly graded. Mostly fine sand, 10 sub-rounded fine gravel, <5% non-plastic fines, brown.		SAND	
5	S3	3-4 4-3	2	1.6	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown.			
	Bottom of Boring 6.0'							
10								
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEqp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: Continuous spoon driven
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BORING LOCATION <u>521+08 N 4</u>						DATE START - FINISH <u>12/1/98-12/1/98</u>		B16	
GROUND ELEVATION <u>152.0</u> DATUM <u>NGVD</u>						DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. _____ DATE _____						LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>12.0</u>	Page 1 of 1

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
	S1	1-2 6-9	2	1	Upper 0.5' - TOPSOIL Lower 0.5' - SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 15% sub-rounded gravel, <5% non-plastic fines, brown.		TOPSOIL	
5	S2	4-7 13-13	2	1.4	SAND (SP) Narrowly graded. Mostly fine sand, 5% non-plastic fines, light brown.		SAND AND SAND WITH SILT	
10	S3	5-6 18-23	2	1.2	SAND WITH SILT (SP-SM) Narrowly graded. Mostly fine 10% non-plastic fines, light brown.			
	Bottom of Boring 12.0'							
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A
2.0 IN. OD SPLIT SPOON SAMPLER
WOR-WEIGHT OF RODS
WOH-WEIGHT OF RODS AND HAMMER
PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC-LENGTH OF RECOVERED SAMPLE
RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, %
S-SPLIT SPOON SAMPLE Sv-TORVANEqp-PENETROMETER
U-UNDISTURBED SAMPLE V GROUND WATER

Notes: Auger boring

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BORING LOCATION <u>525+07</u>				DATE START - FINISH <u>12/1/98-12/1/98</u>				B17	
GROUND ELEVATION <u>156.0</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>				Page 1 of 1	
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>					
				TOTAL DEPTH (Ft.) <u>12.0</u>					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
<div style="text-align: center;">5</div> <div style="text-align: center;">10</div> <div style="text-align: center;">15</div> <div style="text-align: center;">20</div> <div style="text-align: center;">25</div> <div style="text-align: center;">30</div>	S1	1-1 2-4	2	1.2	Upper 0.3' - TOPSOIL Bottom 0.9' - SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown, roots.		TOPSOIL	
	S2	4-6 7-10	2	1.2	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown.		SAND	
	S3	2-8 11-15	2	1.2	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, light brown.			
					12.0'			
					Bottom of Boring 12.0'			

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Auger boring <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway © GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION 529+07					DATE START - FINISH 12/1/98-12/1/98		B18	
GROUND ELEVATION 132.4					DATUM NGVD		DRILLED BY Maine Test Boring	
GROUND WATER EL. _____ DATE _____					LOGGED BY Brian F. Jankauskas		TOTAL DEPTH (Ft.) 12.0'	
Page 1 of 1								
DEPTH	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
FT.	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
5	S1	WOH 1-1 3	2	0.8	Upper 0.4' - TOPSOIL Lower 0.4' - SAND (SP) Narrowly graded. Mostly fine to medium sand, 5% non-plastic fines, dark brown.	1.0'	TOPSOIL	
	S2	3-5 4-9	2	1.3	Upper 0.5' - SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, light brown. Lower 0.8' - SILT WITH SAND (ML) Mostly silt, ~15% fine sand, gray, low toughness, rapid dilatency.	6.0' 7.5'		
	S3	14-17 23-24	2	1.5	SAND (SP) Narrowly graded. Mostly fine to medium sand, 5% non-plastic fines, gray and orange.	12.0'		
10					Bottom of Boring 12.0'			
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER
 WOR-WEIGHT OF RODS
 WOH-WEIGHT OF RODS AND HAMMER
 PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 REC-LENGTH OF RECOVERED SAMPLE
 RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, %
 S-SPLIT SPOON SAMPLE
 U-UNDISTURBED SAMPLE

Notes: Auger boring
 Ground water at ~10' on completion of boring.

Sv-TORVANEQp-PENETROMETER
 V GROUND WATER

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BORING LOCATION <u>533+07</u>					DATE START - FINISH <u>12/1/98-12/1/98</u>			B20	
GROUND ELEVATION <u>149.0</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>				
GROUND WATER EL. <u> </u> DATE <u> </u>					LOGGED BY <u>Brian F. Jankauskas</u>			TOTAL DEPTH (Ft.) <u>12.0</u>	
Page 1 of 1									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.				
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">5</div> <div style="margin-bottom: 20px;">10</div> <div style="margin-bottom: 20px;">15</div> <div style="margin-bottom: 20px;">20</div> <div style="margin-bottom: 20px;">25</div> <div style="margin-bottom: 20px;">30</div> </div>	S1	3-10 10-9	2	1.0	Upper 0.4' - TOPSOIL		TOPSOIL	
					Lower 0.6' - SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 15% rounded fine gravel, 5% non-plastic fines, brown.			
	S2	53 50/0.2'	0.7	0.2	GRAVEL WITH SAND (GP) Narrowly graded. Mostly fine gravel, 40% fine to coarse sand, <5% non-plastic fines, brown.		SANDS AND GRAVEL	
	S3	29-51 30-46	2	0.9	SAND (SP) Narrowly graded. Mostly fine to medium sand, 10% rounded to angular gravel, 5% non-plastic fines, brown.			
	Bottom of Boring 12.0'							

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: Auger boring <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION		535+35 S 49		DATE START - FINISH		12/1/98-12/1/98		B21			
GROUND ELEVATION		164.7		DATUM		NGVD		DRILLED BY		Maine Test Boring	
GROUND WATER EL.				DATE				LOGGED BY		Brian F. Jankauskas	
								TOTAL DEPTH (Ft.)		17.0	
Page 1 of 1											

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
	S1	5-5 6-7	2	0.3	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 20% rounded and angular gravel, <5% non-plastic fines, brown.			
5	S2	19-15 11-16	2	0.6	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 15% sub-angular coarse gravel, <5% non-plastic fines, brown.		SAND WITH GRAVEL	
10	S3	10-17 16-17	2	1.0	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 15% sub-rounded to angular fine gravel, <5% fine plastic fines, brown.			
15	S4	9-14 19-19	2	1.2	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, light brown.			
	17.0'							
	Bottom of Boring 17.0'							
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: Auger boring
	Broad Street Parkway Φ GEI Consultants, Inc. Project 98217

BORING LOCATION <u>536+34 N 54</u>						DATE START - FINISH <u>12/1/98-12/1/98</u>		B22	
GROUND ELEVATION <u>161.5</u> DATUM <u>NGVD</u>						DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. _____ DATE _____						LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>17.0</u>	Page 1 of 1

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
5	S1	1-3 5-6	2	0.9	Upper 0.1' - TOPSOIL 0.2' Lower 0.7' - SAND (SP) Narrowly graded. Mostly fine sand, 5% non-plastic fines, brown.		TOPSOIL SAND	
					4'			
	S2	10-18 16-27	2	1.6	SILTY SAND (SM) Narrowly graded. Mostly fine sand, 20% non-plastic fines, light brown and orange.		SILTY SAND	
10	S3	11-18 21-27	2	1.5	SILTY SAND (SM) Narrowly graded. Mostly fine sand, 15% non-plastic fines, light brown and orange.			
15	S4	12-19 25-31	2	1.5	SILTY SAND (SM) Narrowly graded. Mostly fine sand, 20% non-plastic fines, light brown and orange.			
					17.0'			
					Bottom of Boring 17.0'			
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A
 2.0 IN. OD SPLIT SPOON SAMPLER
 WOR-WEIGHT OF RODS
 WOH-WEIGHT OF RODS AND HAMMER
 PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 REC-LENGTH OF RECOVERED SAMPLE
 RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, %
 S-SPLIT SPOON SAMPLE Sv-TORVANEqp-PENETROMETER
 U-UNDISTURBED SAMPLE V GROUND WATER

Notes: Auger boring

GEI Consultants, Inc.
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BORING LOCATION <u>213+55 W150</u>					DATE START - FINISH <u>8/12/98-8/12/98</u>		B28	
GROUND ELEVATION <u>143.9</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. _____ DATE _____					LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>17.0</u>	
Page 1 of 1								

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	2-3 2-1	2	1.3	Upper 0.3'-TOPSOIL 0.5' Lower 1.0' -SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown. FILL.		TOPSOIL	
5	S2	13-10 10-10	2	1.3	SAND (SW) Widely graded. Mostly fine to medium sand, <10% fine gravel, <5% non-plastic fines, mostly black, small amount of roots. FILL.		FILL	
10	S3	12-50 39-33	2	1.4	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to medium sand, ~40% angular to subrounded gravel, <5% non-plastic fines, brown.		SAND WITH GRAVEL	
15	S4	20-33 27-17	2	1.1	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 45% angular to subrounded gravel, <5% non-plastic fines, brown.			
					Bottom of Boring 17.0'			
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Cased (drive) wash boring. <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION: STA 214+50
GROUND ELEV. (NGVD): 160.6'
START / FINISH DATE: 07/26/00 (07:00-7:30)
GW DEPTH / ELEV.: No GWT encountered
GWT DATE / TIME: NM

TOTAL DEPTH: 12.0'
SOIL BORING: 12.0'
ROCK CORE: 0.0'
DRILLED BY: MTB, TS
LOGGED BY: ALS

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN O.D. SPLIT SPOON SAMPLER
NM - NOT MEASURED
PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC - RECOVERY LENGTH OF SAMPLE
ROD - LENGTH OF SOUND CORES > 4 IN. / LENGTH CORED. (%)

S - SPLIT SPOON SAMPLE	Σ	- MEASURED GWT
A - AUGER SAMPLE		
U - UNDISTURBED SAMPLE		
UF - UNDISTURBED SAMPLE, FIXED PISTON	Σ	- ESTIMATED GWT
UO - UNDISTURBED SAMPLE, OSTERBERG		

ELEV. (ft)	DEPTH (ft)	TYPE and NUMBER	SPT N per 6 in	PEN (in)	REC (in)	REMARKS	GWT	LITH.	USCS SOIL AND ROCK DESCRIPTIONS	STRATA CHANGE	WELL
160	0	S1	1 1 2 5	24	14	Test boring advanced using 4 1/4" SSA.			(S1) 0"-6" Topsoil. 6"-14" (SW) WIDELY GRADED SAND: Fine to coarse sand, dark brown. Contains - 10% rounded gravel to 3/4", dark gray. FILL		
155	-5	S2	1 1 2 3	24	10				(S2) (SW) Similar to S1. Asphalt rubble in tip of spoon. FILL		
150	-10	S3	6 8 10 16	24	20				(S3) 0"-6" (SW) Similar to S2. FILL	10.5'	
						B.O.B.			6"-20" (SP) NARROWLY GRADED SAND: Medium sand with - 5% coarse sand and < 5% non-plastic fines, stratified, light brown.		
									Boring terminated at 12.0'.		

BORING LOCATION <u>215+44 Rt 5</u>					DATE START - FINISH <u>8/1298-8/12/98</u>			B31 Page 1 of 1	
GROUND ELEVATION <u>164.2</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>				
GROUND WATER EL. _____ DATE _____					LOGGED BY <u>Brian F. Jankauskas</u>			TOTAL DEPTH (Ft.) <u>17.0</u>	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft	REC ft				
0	S1	11-5 4-8	2	1.2	Upper 0.3'-TOPSOIL Lower 0.9'-SAND (SP) Narrowly graded. Mostly fine sand, 10% fine gravel <5% non-plastic fines, 5% roots, brown.	0.3'	TOPSOIL	
5	S2	2-2 4-4	2	0	No recovery.			
	S3	4-5 4-5	2	0.2	SAND (SW) Widely graded sand. Mostly fine to coarse sand, <5% non-plastic fines, brown.		SAND	
10	S4	4-5 5-7	2	1.7	SAND (SW) Widely graded. Mostly fine to medium sand, <5% non-plastic fines, brown, <10% coarse sand and gravel.			
15	S5	1-2 6-8	2	1.9	SILT WITH SAND (ML) Rapid dilatency, medium plasticity, low toughness, ~35% fine sand. Uneven gray and brown stratification.	17.0'		
					Bottom of Boring 17.0'			
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED. % S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: Asbestos sample from 15'. Auger boring.
	Broad Street Parkway

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 February 1999

BORING LOCATION <u>204+00 E 7</u>					DATE START - FINISH <u>12/1/98-12/1/98</u>			B32 Page 1 of 1	
GROUND ELEVATION <u>187.0</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>				
GROUND WATER EL. <u> </u> DATE <u> </u>					LOGGED BY <u>Brian F. Jankauskas</u>			TOTAL DEPTH (Ft.) <u>12.5</u>	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
5	S1	1-2	2	0.9	Upper 0.5' - TOPSSOIL		TOPSOIL	
		6-14			1.0'		SAND WITH SILT	
	Lower 0.4' - SAND WITH SILT (SP-SM) Narrowly graded. Mostly fine sand, 10 non-plastic fines, brown, roots.					3.0'		
10	S2	18-36	2	1.0	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 25% sub-rounded to angular gravel, <5% non-plastic fines, brown.		SAND WITH GRAVEL	
10.5		37-34			Cobbles from 8' to 10.5'			
12.5	S3	30-41	2	1.0	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 30% angular gravel, <5% non-plastic fines, brown.			
		46-52			12.5'			
Bottom of Boring 12.5'								
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER U-UNDISTURBED SAMPLE <input checked="" type="checkbox"/> GROUND WATER	Notes: Auger boring <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>201+19 W17</u>					DATE START - FINISH <u>8/12/98-8/12/98</u>			B33	
GROUND ELEVATION <u>187.2</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>				
GROUND WATER EL. _____ DATE _____					LOGGED BY <u>Brian F. Jankauskas</u>			TOTAL DEPTH (Ft.) <u>12.0</u>	
Page 1 of 1									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	1-1	2	1.3	Upper 0.2'-TOPSOIL Pine Needles. 0.5'		TOPSOIL	
		3-4			Lower 1.1'-SAND (SP) Narrowly graded. Mostly fine sand, 5% non-plastic fines, brown.			
5	S2	6-10	2	0.9	Upper 0.2'-SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown. Lower 0.7'-SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, ~40% subrounded to subangular gravel, <5% non-plastic fines, brown.		SAND AND SAND WITH GRAVEL	
		19-28						
10	S3	6-12	2	1.2	SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown.			
		10-13			12.0'			
	Bottom of Boring 12.0'							
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER U-UNDISTURBED SAMPLE <input checked="" type="checkbox"/> GROUND WATER	Notes: Auger boring.
	Broad Street Parkway
	Φ GEI Consultants, Inc. Project 98217

BORING LOCATION 540+56 N 5						DATE START - FINISH 12/2/98-12/2/98			B38
GROUND ELEVATION 186.6 DATUM NGVD						DRILLED BY Maine Test Boring			
GROUND WATER EL. DATE						LOGGED BY Brian F. Jankauskas			TOTAL DEPTH (Ft.) 42.0'
									Page 1 of 2

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
	S1	2-5 16-23	2	0.9	Upper 0.1' - TOPSOIL 0.3' Lower 0.8' - SAND (SW) Widely graded. Mostly fine to sand, 25% rounded fine gravel, <5% non-plastic fines, brown, roots.		TOPSOIL	
5	S2	35-61 26-43 /0.4'	1.9	1.2	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 20% rounded to angular gravel, 5-10% non-plastic fines, brown to light brown, roots.		SAND WITH GRAVEL	
10	S3	47-42 53-96	2	0.5	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine and coarse sand, 25% rounded and angular gravel, 5-10% non-plastic fines, brown.			
15	S4	28-25 31-23	2	0.5	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 20% rounded to angular fine gravel, <5% non-plastic fines, gray-brown.			
20	S5	29-16 13-16	2	0.6	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 15% rounded to sub-rounded fine gravel, <5% non-plastic fines, gray-brown. 23.5'			
25	S6	20-25 37-39	2	0.9	SAND (SP) Narrowly graded. Mostly fine sand, 5% non-plastic fines, brown.		SAND	
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER

WOH-WEIGHT OF RODS

WOH-WEIGHT OF RODS AND HAMMER

PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC-LENGTH OF RECOVERED SAMPLE

RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, %

S-SPLIT SPOON SAMPLE Sv-TORVANEqp-PENETROMETER

U-UNDISTURBED SAMPLE V GROUND WATER

Notes: Auger 0-5'
Case (driven) wash boring 5' to 42'

Broad Street Parkway
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Project 98217

BORING LOCATION <u>540+56 N 5</u>					DATE START - FINISH <u>12/2/98-12/2/98</u>			B38 Page 2 of 2	
GROUND ELEVATION <u>186.6</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>				
GROUND WATER EL. <u> </u> DATE <u> </u>					LOGGED BY <u>Brian F. Jankauskas</u>			TOTAL DEPTH (Ft.) <u>42</u>	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
30	S7	26-35 59-54	2	0.9	SAND (SP) Narrowly graded. Mostly fine sand, 5-10% non-plastic fines, gray-brown.		SAND	
35	S8	32-39 50-56	2	0.9	Similar to S7			
40	S9	50-59 78-83	2	0.9	SILTY SAND (SM) Narrowly graded. Mostly fine sand, 15% non-plastic fines, brown-gray.		SILTY SAND	
					38.5'			
					42.0'			
					Bottom of Boring 42.0'			
45								
50								
55								
60								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway © GEI Consultants, Inc. </div>
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BORING LOCATION <u>543+06</u>				DATE START - FINISH <u>12/1/98-12/1/98</u>				B39A	
GROUND ELEVATION <u>136.9</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. _____ DATE _____				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>11.7</u>	
								Page 1 of 1	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
5	S1	1-1 2-3	2	1.2	Upper 0.7'- TOPSOIL		TOPSOIL	
					Lower 0.5' - SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~25% non-plastic fines, gray-brown.		SILTY SAND	
					B39 encountered refusal at 4.5' cobbles/boulders 4' to 6'		GRAVEL WITH SAND	
10	S2	47-84	1	0.6	GRAVEL WITH SAND (GW) Widely graded. Mostly fine to coarse rounded to angular gravel, 40% fine to coarse sand, 5% non-plastic fines, brown.		GRAVEL WITH SAND	
							SAND WITH GRAVEL	
15	S3	24-33 43-50 /0.2'	1.7	1.0	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 25% sub-rounded to angular fine gravel, <5% non-plastic fines, brown.		SAND WITH GRAVEL	
Bottom of Boring 11.7'								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER U-UNDISTURBED SAMPLE <input checked="" type="checkbox"/> GROUND WATER	Notes: Auger boring B39 located on roadway centerline encountered refusal at 4.5'.
Broad Street Parkway	Φ GEI Consultants, Inc. Project 98217





PROJECT: Broad Street Parkway
NUMBER: 98217
LOCATION: Nashua, NH

PAGE
1
OF
1

BORING NUMBER
B64

BORING LOCATION: Sta 863+97 8E
GROUND ELEV. (NGVD): 153.1'
START / FINISH DATE: 02/27/01
GW DEPTH / ELEV.: Not Encountered
GW DATE / TIME: Not Encountered

TOTAL DEPTH: 17'
SOIL BORING: 17'
ROCK CORE: 0'
DRILLED BY: MTB
LOGGED BY: ALS

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN O.D. SPLIT
 SPOON SAMPLER
 NM - NOT MEASURED
 PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 REC - RECOVERY LENGTH OF SAMPLE
 RQD - LENGTH OF SOUND CORES > 4 IN. / LENGTH CORED, (%)
 S - SPLIT SPOON SAMPLE
 A - AUGER SAMPLE  - MEASURED GWL
 U - UNDISTURBED SAMPLE
 UF - UNDISTURBED SAMPLE, FIXED PISTON  - ESTIMATED GWL
 UO - UNDISTURBED SAMPLE, OSTERBERG

NOTES:

ELEV. (ft)	DEPTH (ft)	TYPE and NUMBER	SPT N per 6 in	PEN (in)	REC (in)	REMARKS	GWL	LITH.	USCS SOIL AND ROCK DESCRIPTIONS	STRATA CHANGE	WELL
-0		S1	8 13 8 4	24	11	Boring adv. using 4" SSA			0"-1" ASPHALT (not sampled) (S1) (SW-SM) WIDELY GRADED SAND WITH SILT AND GRAVEL: ~25% angular to subrounded gravel to 1/2", ~10% nonplastic fines, light brown to brown, FILL.	-4'	
-5		S2	3 3 4 5	24	13	Boring adv. using 5 1/4" HSA			(S2) (SP) NARROWLY GRADED SAND: Stratified, fine sand, light brown with occasional orange layer.		
-10		S3	10 5 4 4	24	15				(S3) (SP) Similar to S2.		
-15		S4	3 5 0 0 0	24	21				(S4) (SP) Similar to S2.		
-17						B.O.B.			Boring terminated at 17'.		

BORING LOCATION <u>864+57 W 36</u>		DATE START - FINISH <u>9/3/98-9/3/98</u>		B65	
GROUND ELEVATION <u>152.8</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>		Page 1 of 1	
GROUND WATER EL. _____ DATE _____		LOGGED BY <u>Brian F. Jankauskas</u>			
		TOTAL DEPTH (Ft.) <u>17.0</u>			

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	6-10 13-15	2	0.6	Asphalt SAND (SW) Widely graded. Mostly fine to coarse sand, 10% fine, subangular gravel, 5% non-plastic fines, 5% ash. Top 0.2' is black, bottom 0.4' is brown.	0.1'	ASPHALT	
				3.0'	FILL			
5	S2	1-8 8-10	2	1.2	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown.		SAND	
10	S3	7-9 10-11	2	1.8	Similar to S2.			
15	S4	9-11 13-14	2	1.9	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown with orange stratification.			
	Bottom of Boring 17.0'							
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Auger boring.
	Broad Street Parkway
	GEI Consultants, Inc. Project 98217

BORING LOCATION <u>231+04</u>				DATE START - FINISH <u>9/3/98-9/3/98</u>				B66	
GROUND ELEVATION <u>152.5</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. _____ DATE _____				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>7.0</u>	
Page 1 of 1									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	7-7	2	1.0	Upper 0.2'-TOPSOIL	0.4'	TOPSOIL	
		11-12			Lower 0.8'-SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown, brick. FILL	-3'	FILL	
5	S2	3-4	2	1.2	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown.	7.0'	SAND	
		5-7						
					Bottom of Boring 7.0'			
10								
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Auger boring.
	Broad Street Parkway
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BORING LOCATION <u>867+41 W 6</u>				DATE START - FINISH <u>9/3/98-9/3/98</u>				B70	
GROUND ELEVATION <u>149.3</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>				Page 1 of 1	
GROUND WATER EL. _____ DATE _____				LOGGED BY <u>Brian F. Jankauskas</u>					
				TOTAL DEPTH (Ft.) <u>7.0</u>					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	13-16 17-17	2	1.4	SAND (SW) Widely graded. Mostly fine to coarse sand, <5% non-plastic fines. 0.3'-thick lense of ash at 1', brown. FILL.		FILL	
5	S2	13-6 6-9	2	1.1	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown.		SAND	
					4.0'			
					7.0'			
					Bottom of Boring 7.0'			
10								
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <input checked="" type="checkbox"/> GROUND WATER	Notes: Auger boring.
	Broad Street Parkway
	GEI Consultants, Inc. Project 98217

BORING LOCATION <u>870+04 W 5</u>					DATE START - FINISH <u>8/13/98-8/13/98</u>			B71	
GROUND ELEVATION <u>150.3</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>				
GROUND WATER EL. _____ DATE _____					LOGGED BY <u>Brian F. Jankauskas</u>			TOTAL DEPTH (Ft.) <u>27.0</u>	
Page 1 of 1									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	2-7 14-8	2	0.9	Upper 0.3'-TOPSOIL Lower 0.6'-SAND (SP) Narrowly graded. Mostly medium sand, 5% fine gravel, ~30% coal-like material, <5% non-plastic fines, black. FILL.		TOPSOIL	Gravel lodged in tip of spoon
5	S2	1-0 1-1	2	0.7	SAND (SW) Widely graded. Mostly fine to coarse sand, ~25% coal-like material, <5% non-plastic fines, black. FILL.		FILL	
10	S3	1-2 1-1	2	0.9	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine sand, 15% fine subrounded gravel, ~25% coal, <5% non-plastic fines. Upper 0.6' black, lower 0.3' brown. FILL.			
15	S4	1-2 2-3	2	1.4	SAND (SP) Narrowly graded. Mostly fine sand, 10% gravel, <5% non- plastic fines, brown. FILL.			
20	S5	3-3 3-2	2	1.5	SAND (SP) Narrowly graded. Mostly fine sand, 10% gravel, <5% non-plastic fines, tan with brown/black lenses. FILL.			
25	S6	2-4 5-5	2	1.4	SAND (SW) Widely graded. Mostly fine to medium sand, 5% gravel, <5% non-plastic fines, brown. Slight stratification observed. 27.0'		SAND	
30					Bottom of Boring 27.0'			

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Auger boring. <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>872+10</u>					DATE START - FINISH <u>8/13/98-8/13/98</u>		B72	
GROUND ELEVATION <u>151.7</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. _____ DATE _____					LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>27.0</u>	
Page 1 of 1								

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN #	REC #				
0	S1	10-15 27-23	2	1.8	Upper 0.2' Asphalt. SAND (SP) Narrowly graded. Mostly fine to medium sand, ~40% black coal ash. FILL.	0.2'	ASPHALT	
5	S2	1-1 0-1	2	0.6	SAND (SP) Narrowly graded. Mostly fine to medium sand. ~30% coal ash, orange to light grey. FILL.			
10	S3	1-1 1-2	2	0.7	SAND WITH GRAVEL (SP) Narrowly graded. Mostly medium sand, ~20% coal, 20% gravel, black. FILL.		FILL	
15	S4	7-10 3-1	2	0.5	SAND WITH GRAVEL (SP) Narrowly graded. Mostly coarse sand, ~30% ash, <5% non-plastic fines, 25% gravel, black, brick. FILL.			
20	S5	5-9 18-23	2	0.3	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 15% angular gravel, coal slag, <5% non-plastic fines, brown and black. FILL.			
25	S6	4-7 6-7	2	1.5	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, ~30% sub-angular gravel, ~5% coal ash material, <5% non-plastic fines, small lenses of black silty sand. FILL.	27.0'		
					Bottom of Boring 27.0'			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: Auger boring. <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>873+00</u>				DATE START - FINISH <u>8/13/98-8/13/98</u>				B73	
GROUND ELEVATION <u>144.1</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>12.0</u>	
Page 1 of 1									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN lb.	REC ft.				
0	S1	4-10 11-11	2	1.2	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, ~35% fine subrounded gravel, <5% non-plastic fines, brown. FILL.		FILL	
					4.0'			
5	S2	3-5 4-5	2	1.7	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, light brown to orange.		SAND	
10	S3	4-4 8-9	2	2	Similar to S2.			
					12.0'			
					Bottom of Boring 12.0'			
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Auger boring.
	Broad Street Parkway
	GEI Consultants, Inc. Project 98217

BORING LOCATION <u>878+00</u>					DATE START - FINISH <u>8/13/98-8/13/98</u>		B77	
GROUND ELEVATION <u>155.9</u>					DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>	
GROUND WATER EL. _____ DATE _____					LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>12.0</u>	
Page 1 of 1								
DEPTH	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS"	STRATUM DESCRIP.	Remarks
FT.	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	7-12 11-9	2	1.5	Upper 1.2'-SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, ~10% coarse sand and fine gravel, black (coal). FILL. 1.2'		FILL	
					Lower 0.3'-SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown.			
5	S2	4-5 5-6	2	1.5	SAND (SW) Widely graded. Mostly fine to coarse sand, 5% fine gravel, <5% non-plastic fines, brown.		SAND	
10	S3	3-5 7-9	2	1.6	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown, light brown to orange.			
					12.0'			
					Bottom of Boring 12.0'			
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A
 2.0 IN. OD SPLIT SPOON SAMPLER
 WOR-WEIGHT OF RODS
 WOH-WEIGHT OF RODS AND HAMMER
 PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 REC-LENGTH OF RECOVERED SAMPLE
 RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, %
 S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER
 U-UNDISTURBED SAMPLE V GROUND WATER

Notes:

Boring advanced with augers.

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BORING LOCATION <u>880+93 N 74</u>				DATE START - FINISH <u>7/30/98-7/31/98</u>				B86	
GROUND ELEVATION <u>156.6</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>17.0</u>	
DEPTH FT.		SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
		TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	14-9 9-17	2	1.1	Upper 0.5'-SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine sand, ~30% fine round to subangular gravel, <5% non-plastic fines, brown. FILL. Lower 0.6'-SAND (SP) Narrowly graded. Mostly medium sand, ~10% coal ash, ~10% fine subrounded gravel, <5% non-plastic fines, black. FILL.		FILL		
					4.0'				
5	S2	6-8 1-15	2	1.7	SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown.		SAND		
10	S3	5-6 6-11	2	1.3	SAND (SP) Mostly medium sand, <5% non-plastic fines, brown.				
15	S4	6-10 13-12	2	NR	SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown.				
					17.0'				
					Bottom of Boring 17.0'				
20									
25									
30									

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: Auger boring. NR indicates Not Recorded.
	Broad Street Parkway
	Φ GEI Consultants, Inc. Project 98217

BORING LOCATION: Sta 882+00
GROUND ELEV. (NGVD): 155.9'
START / FINISH DATE: 02/27/01
GW DEPTH / ELEV.: Not Encountered
GW DATE / TIME: Not Encountered

TOTAL DEPTH: 17'
SOIL BORING: 17'
ROCK CORE: 0'
DRILLED BY: MTB
LOGGED BY: ALS

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN O.D. SPLIT
SPOON SAMPLER

NM - NOT MEASURED

PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC - RECOVERY LENGTH OF SAMPLE

RQD - LENGTH OF SOUND CORES > 4 IN. / LENGTH CORED, (%)

S - SPLIT SPOON SAMPLE

A - AUGER SAMPLE ▽ - MEASURED GWL

U - UNDISTURBED SAMPLE

UF - UNDISTURBED SAMPLE, FIXED PISTON ≍ - ESTIMATED GWL

UO - UNDISTURBED SAMPLE, ØSTERBERG

NOTES:

[illegible]

BORING LOCATION <u>883+92 S 5</u>		DATE START - FINISH <u>11/16/98-11/16/98</u>		B88	
GROUND ELEVATION <u>155.2</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. _____ DATE _____		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>12</u>	
Page 1 of 1					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
	S1	7-11 12-11	2	1.0	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 25% sub-rounded to angular gravel, <5% non-plastic fines, brown, FILL.		FILL	
5	S2	7-5 3-3	2	1.0	SAND (SP) Narrowly graded. Mostly fine to medium sand, 5% sub-angular gravel, <5% non-plastic fines, brown, FILL.			
10	S3	4-1 1-2	2	1.5	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, coal, light to dark brown, FILL.			
	Bottom of Boring 12.0'							
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER
 WOR-WEIGHT OF RODS
 WOH-WEIGHT OF RODS AND HAMMER
 PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 REC-LENGTH OF RECOVERED SAMPLE
 RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, %
 S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER
 U-UNDISTURBED SAMPLE V GROUND WATER

Notes: Auger 0 to 5'
 Case (driven) wash 5 to 12'

Broad Street Parkway

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BORING LOCATION <u>886+21 N 16</u>				DATE START - FINISH <u>11/16/98-11/16/98</u>				B89 Page 1 of 1	
GROUND ELEVATION <u>156.6</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>12</u>	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0.3	S1	13-12 11-8	2	1.1	ASPHALT 0.3'		ASPHALT	
2.3					SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 25% sub-rounded to angular fine gravel, <5% non-plastic fines, brown, FILL.			
5	S2	2-2 4-3	2	0.9	SAND (SP) Narrowly graded. Mostly fine to medium sand, 10% sub-rounded to sub-angular gravel, <5% non-plastic fines, brown, FILL.		FILL	
10	S3	2-3 3-3	2	1.7	SAND (SP) Narrowly graded. Mostly fine to medium sand, 5% rounded fine gravel, <5% non-plastic fines, coal, light to dark brown and orange, FILL.			
					12.0'			
					Bottom of Boring 12.0'			
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: Auger 0' to 5' Case (driven) wash 5' to 12'
	Broad Street Parkway
	Φ GEI Consultants, Inc. Project 98217

BORING LOCATION: Sta 887+60 108S
GROUND ELEV. (NGVD): 153.2'
START / FINISH DATE: 03/09/01
GW DEPTH / ELEV.: Not Encountered
GW DATE / TIME: Not Encountered

TOTAL DEPTH: 8.4'
SOIL BORING: 8.4'
ROCK CORE: 0'
DRILLED BY: MTB
LOGGED BY: ALS

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN O.D. SPLIT
 SPOON SAMPLER
 NM - NOT MEASURED
 PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 REC - RECOVERY LENGTH OF SAMPLE
 ROD - LENGTH OF SOUND CORES > 4 IN. / LENGTH CORED, (%)

S - SPLIT SPOON SAMPLE

A - AUGER SAMPLE

U - UNDISTURBED SAMPLE

UF - UNDISTURBED SAMPLE, FIXED PISTON

UO - UNDISTURBED SAMPLE, OSTERBERG

NOTES: Boring terminated at 8.4' because of unknown obstruction.



▼ - MEASURED GWL

 - ESTIMATED GWL

ELEV. (ft)	DEPTH (ft)	TYPE and NUMBER	SPT N per 6 in	PEN (in)	REC (in)	REMARKS	GWL	LITH.	USCS SOIL AND ROCK DESCRIPTIONS	STRATA CHANGE	WELL
0		S1	22	24	20	Boring adv. using 4" SSA			0"-3 1/2" ASPHALT (not sampled) (S1) (SW) WIDELY GRADED SAND: ~5% subrounded gravel to 5/8", brown, FILL.		
-5		S2	3	24	16	Boring adv. using 5 1/4" HSA Suspicious obstruction encountered at 8.4'. B.O.B.			(S2) (SP) NARROWLY GRADED SAND: Mostly medium sand, ~5% coarse sand, <5% nonplastic fines, brown, FILL. =====		
-8.4									Boring terminated at 8.4'.		

BORING LOCATION: Sta 887+72.127S
GROUND ELEV. (NGVD): 153.2'
START / FINISH DATE: 05/02/01
GW DEPTH / ELEV.: Not Encountered
GW DATE / TIME: Not Encountered

TOTAL DEPTH:	17.0'
SOIL BORING:	17.0'
ROCK CORE:	0'
DRILLED BY:	MTB
LOGGED BY:	ALS

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN O.D. SPLIT
 SPOON SAMPLER
 NM - NOT MEASURED
 PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 REC - RECOVERY LENGTH OF SAMPLE
 RQD - LENGTH OF SOUND CORES > 4 IN. / LENGTH CORED, (%)
 S - SPLIT SPOON SAMPLE
 A - AUGER SAMPLE  - MEASURED GWL
 U - UNDISTURBED SAMPLE
 UF - UNDISTURBED SAMPLE, FIXED PISTON  - ESTIMATED GWL
 UO - UNDISTURBED SAMPLE, OSTERBERG

NOTES:

[illegible]

BORING LOCATION <u>888+30 N 14</u>				DATE START - FINISH <u>11/16/98-11/16/98</u>				B93	
GROUND ELEVATION <u>156.6</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. _____ DATE _____				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>12.0</u>	
		Page 1 of 1							

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
5	S1	5-8 8-5	2	0.9	Upper 0.7' - SAND (SP) Narrowly graded. Mostly fine to medium sand, 5% angular fine gravel, <5% non-plastic fines, light brown, FILL. 1.5'		FILL	
					Lower 0.2' - SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, orange/brown.			
	S2	5-5 9-22	2	1.3	Upper 0.9' - SAND WITH SILT (SP-SM) Narrowly graded. Mostly fine sand, 10% non-plastic fines, 5% rounded fine gravel, light brown. Lower 0.4' - SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 20% sub-rounded to sub-angular gravel, 5% non-plastic fines, light brown.		SAND AND SAND WITH SILT	
10	S3	18-12 21-19	2	1.2	Upper 0.7' - SAND (SP) Narrowly graded. Mostly fine sand, 5% non-plastic fines, light brown. Lower 0.5' - SAND (SW) Widely graded. Mostly fine to coarse, sand, 10% sub-rounded gravel, 5% non-plastic fines, brown. 12.0'			
					Bottom of Boring 12.0'			
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: Auger 0 to 5' Case (driven) wash 5' to 12'
	Broad Street Parkway
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BORING LOCATION <u>880+65 N 27</u>				DATE START - FINISH <u>9/2/98-9/2/98</u>				B501	
GROUND ELEVATION <u>156.2</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>31.7</u>	
						Page 1 of 2			

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	1-2 2-3	2	1.2	Top 0.6' - TOPSOIL Bottom 0.6' - SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, orange/brown.		TOPSOIL	
5	S2	10-17 19-18	2	0.8	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown.			
10	S3	11-12 14-16	2	0.9	Top 0.1' - SILT (ML) Rapid dilatency, low toughness, low plasticity, gray. Bottom 0.8' - SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown.			
15	S4	11-13 17-17	2	0.8	SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown.		SAND	
20	S5	11-14 18-22	2	0.8	SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown.			
25	S6	13-16 19-20	2	0.6	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown, with light brown and orange.			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: Cased (driven) wash boring. <div style="display: flex; justify-content: space-between; padding-top: 20px;"> Broad Street Parkway © GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>80+65 N 27</u>					DATE START - FINISH <u>9/2/98-9/2/98</u>					B501	
GROUND ELEVATION <u>156.2</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>					Page 2 of 2	
GROUND WATER EL. _____ DATE _____					LOGGED BY <u>Brian F. Jankauskas</u>					TOTAL DEPTH (Ft.) <u>31.7</u>	
DEPTH		SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks		
FT.		TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.						
30		S7	8-11 25/0.4	1.4	0.6	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown, slight orange lines running through the sample. 31.4' Possible Bedrock or Boulder 31.7'			Fractured gravel lodged in tip of spoon Roller bit to 31.7'		
						Bottom of Boring 31.7'		Bedrock			
35											
40											
45											
50											
55											
60											
BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER							Notes:				
							Broad Street Parkway			GEI Consultants, Inc. Project 98217	

BORING LOCATION <u>881+23 S 10</u>				DATE START - FINISH <u>9/1/98-9/2/98</u>				B502	
GROUND ELEVATION <u>156.5</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u>127.1</u> DATE <u>9/10/98</u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>36.3</u>	
Page 1 of 2									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Equipment Installation
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	2-6 5-5	2	1.5	Top 0.6' - TOPSOIL Bottom 0.9' - SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown, and a 0.1' section of yellow/orange.		TOPSOIL	Locking Standpipe in 0.5' concrete surface seal. 1.9' Stickup on standpipe
5	S2	3-2 2-4	2	0.6	SAND (SW) Well graded. Mostly widely graded sand, <5% non-plastic fines, brown.			1 1/2" ID PVC well riser from 0'-21'.
10	S3	12-9 11-16	2	0.9	SAND (SW) Well graded. Mostly widely graded sand, <5% non-plastic fines, brown.			Filter sand from 2.8' to 18.4'
15	S4	11-16 20-21	2	0.8	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown.		SAND	
20	S5	13-16 17-20	2	0.9	SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown.			Bentonite seal from 18.4' to 19.7' 1 1/2" ID PVC well screen from 21' to 31'
25	S6	13-17 17-20	2	0.1	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown.			Filter sand from 19.7' to 35.6'
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE √ GROUND WATER	Notes: Cased (driven) wash boring. <div style="display: flex; justify-content: space-between; padding-top: 20px;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>881+23 S 10</u>				DATE START - FINISH <u>7/30/98-7/31/98</u>				B502	
GROUND ELEVATION <u>156.5</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u>127.1</u> DATE <u>9/10/98</u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>36.3</u>	
Page 2 of 2									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Equipment Installation
	TYPE & NO.	BLOWS / 6 IN.	PEN in.	REC in.				
30	S7	10-12 25/0.1	1.1	0.4	SAND (SP) Narrowly Graded. Mostly fine sand, <5% non-plastic fines, brown, 1/8" dark brown layer near the end of the split spoon 31.1' GRANITE Fresh to slightly weathered with fractures dipping at 0, 45, and 60 degrees from the horizontal, spaced from 1" to 19" apart. RQD=76.7%			Cuttings from 35.6' to 36.3'
	R1	4 min	5	4.3				
		3 min						
		3 min						
		6 min						
35		8 min			36.3'			
					Bottom of Boring 36.3'			
40								
45								
50								
55								
60								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V- GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 60%;">Broad Street Parkway</div> <div style="width: 35%; text-align: right;"> © GEI Consultants, Inc. Project 98217 </div> </div>
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BORING LOCATION <u>881+82 S 72</u>		DATE START - FINISH <u>8/31/98-9/1/98</u>		B503	
GROUND ELEVATION <u>156.2</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. <u> </u> DATE <u> </u>		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>57.7</u>	
Page 1 of 2					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	2-6	2	1.3	Brick Sidewalk 0-0.2'			
0.2		5-6			Top 0.5'- SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, light brown. FILL			
2.2					Bottom 0.8'- SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, dark brown. FILL		FILL	
5	S2	1-4 6-7	2	1	SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown. FILL			
					~8'			
10	S3	10-12 14-16	2	1	SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown.			
15	S4	13-18 18-17	2	0.7	SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown.		SAND	
20	S5	12-17 18-18	2	0.8	SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown.			
25	S6	15-14 16-22	1	0.8	SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown.			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Cased (driven) wash boring. <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>881+82 S 72</u>		DATE START - FINISH <u>8/31/98-9/1/98</u>		B503	
GROUND ELEVATION <u>156.2</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. <u> </u> DATE <u> </u>		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>57.7</u>	
Page 2 of 2					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO	BLOWS / 6 IN	PEN ft.	REC ft.				
30	S7	20-26 25-28	2	0.9	SAND (SW) Widely graded. Well graded sand, <5% non-plastic fines, top 0.6 orange, bottom 0.3 darker brown.		SAND	
35	S8	13-16 18-21	2	0.9	SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown.			
40	S9	9-11 20-31	2	0.9	Top 0.3'- SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown. Bottom 0.6'- SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown, angular gravel in tip of spoon. 42.0'			
45	S10	23-57 89-30 /0.1	1.6	0.8	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 15% subrounded to angular fine gravel, <5% non-plastic fines, brown. Glacial till. 47.8'		GLACIAL TILL	
50	R1	4 min 3 min 3 min 4 min 4 min	5.1	4.5	GRANITE Fresh to slightly weathered, fractures dipping at 0, 20, 45, and 80 degrees from the horizontal spaced from 2" to 15" apart. RQD=60.5% No water return while coring.		BEDROCK	
53.2	R2	6 min 6 min 6 min 3 min 3 min	4.5	4.2	GRANITE Fresh to slightly weathered, fractures dipping at 10, 30, 45, 50, and 70 degrees from the horizontal spaced from 1" to 18.5" apart. RQD=68.9% No water return while coring.			
57.7					57.7'			
60					Bottom of Boring 57.7'			

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <input checked="" type="checkbox"/> GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 60%;">Broad Street Parkway</div> <div style="width: 35%; text-align: right;"> Φ GEI Consultants, Inc. Project 98217 </div> </div>
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BORING LOCATION <u>879+15 N 21</u>				DATE START - FINISH <u>8/18/98- 8/18/98</u>				B504	
GROUND ELEVATION <u>156.4</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>42.1</u>	
Page 1 of 2									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	1-3 4-6	2	1.4	Upper 0.3' TOPSOIL Lower 1.1' SAND (SP) Narrowly graded. Mostly fine to medium sand, ~5% fine subrounded gravel, ~5% non-plastic fines, brown. FILL.		FILL	
5	S2	8-6 6-6	2	0.6	SAND (SP) Narrowly graded. Mostly fine to medium sand, ~5% fine subrounded gravel, <5% non-plastic fines, dark brown. FILL.			
10	S3	9-8 9-9	2	0.7	SAND (SP) Narrowly graded. Mostly fine to medium sand, ~5% fine subrounded gravel, <5% non-plastic fines, brown.			
15	S4	11-15 18-20	2	0.7	SAND (SP) Narrowly graded. Mostly fine to medium sand, ~5% fine rounded gravel, <5% non-plastic fines, light brown.		SAND	
20	S5	24-28 32-25	2	0.2	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown.			
25	S6	20-20 18-18	2	0.4	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, ~5% fine subrounded gravel, brown.			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp- PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Cased (drive) wash boring. <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>879+15 N 21</u>				DATE START - FINISH <u>8/18/98-8/18/98</u>				B504	
GROUND ELEVATION <u>156.4</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. _____ DATE _____				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>42.1</u>	
		Page 2 of 2							

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
30	S7	21-20 21-22	2	0.8	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown.		SAND	
35	S8	17-19 25-30	2	0.8	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown.			
40	S9	56-27 41-82	2	0.9	SAND WITH GRAVEL (GW) Widely graded. Mostly fine to coarse sand, 30% fine subrounded to subangular gravel, <5% non-plastic fines, brown.		GLACIAL TILL	
					40.0'			Refusal of Casing
					42.1'			
					Bottom of Boring 42.1' Possible Bedrock			
45								
50								
55								
60								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEQp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes:
	Broad Street Parkway
	Φ GEI Consultants, Inc. Project 98217

BORING LOCATION <u>879+88 S 27</u>				DATE START - FINISH <u>8/28/98- 8/28/98</u>				B505	
GROUND ELEVATION <u>157.4</u>		DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>		TOTAL DEPTH (Ft.) <u>38.1</u>			
GROUND WATER EL. <u>125.6</u>		DATE <u>9/10/98</u>		LOGGED BY <u>Brian F. Jankauskas</u>				Page 1 of 2	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	2-2 2-3	2	1.0	Upper 0.3' - TOPSOIL Lower 0.7' - SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, yellow/brown. FILL.			Locking standpipe in 0.5' concrete surface seal.
5	S2	5-7 9-11	2	0.8	SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown. FILL.		FILL	2.2' Stickup on standpipe.
10	S3	13-12 14-15	2	0.8	Similar to S2.			1-1/2" ID PVC well riser.
15	S4	16-19 19-21	2	0.8	Upper 0.7' - Similar to S2, FILL. ~16.5'			Backfill with sand from 0.5' to 25.0',
20	S5	23-20 24-27	2	0.9	Upper 0.1' - SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines. Light brown. Slightly stratified.			
25	S6	17-21 25-26	2	1.0	Upper 0.2' Similar to S2. Lower 0.7' SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, light brown, slightly stratified.		SAND	Bentonite seal from 25.0' to 26.3'.
30								Backfill with sand from 26.3' to 38.1'.

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <input checked="" type="checkbox"/> GROUND WATER	Notes: Cased (driven) wash boring. <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>879+88 S 27</u>				DATE START - FINISH <u>8/28/98-8/28/98</u>				B505	
GROUND ELEVATION <u>157.4</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u>125.6</u> DATE <u>9/10/98</u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>38.1</u>	
						Page 2 of 2			

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
30	S7	11-12 15-15	2	0.7	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown.		SAND	1-1/2" ID slotted PVC well screen from 27.5' to 37.5'.
35	S8	7-7 12-17	2	1.0	Upper 0.7'- SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown. Lower 0.3'- SAND (SP) Narrowly graded. Mostly fine sand, ~5% non-plastic fines, light brown.			
					37.5'			
					Glacial Till	38.0'	TILL	
					Roller bit boulder or possible bedrock from 38.0' to 38.1'		BEDROCK?	
					Bottom of Boring 38.1'			
40								
45								
50								
55								
60								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes:
	Broad Street Parkway
	Φ GEI Consultants, Inc. Project 98217

BORING LOCATION <u>880+64 S 78</u>				DATE START - FINISH <u>8/17/98- 8/17/98</u>				B506	
GROUND ELEVATION <u>153.2</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>42.8</u>	
Page 1 of 2									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	1-2 3-3	2	0.3	SAND WITH GRAVEL (SW). Widely graded. Mostly fine to coarse sand, 20% fine subrounded gravel. <5% non-plastic fines, brown. FILL.		FILL	
5	S2	3-2 3-5	2	0.6	Upper 0.2' - SAND (SW) Widely graded. Mostly fine to coarse sand, <5% non-plastic fines, brown. FILL 5.2' Lower 0.4' - SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, light brown.			
10	S3	10-10 10-11	2	0.8	SAND (SP). Narrowly graded. Mostly fine sand, <5% non-plastic fines, light brown.		SAND	
15	S4	12-12 12-14	2	0.8	Similar to S3.			
20	S5	11-12 13-14	2	0.8	Similar to S3.			
25	S6	14-15 15-20	2	0.8	Similar to S3.			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V- GROUND WATER	Notes: Cased (drive) wash boring. <div style="display: flex; justify-content: space-between; padding-top: 20px;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>880+64 S 78</u>					DATE START - FINISH <u>8/17/98-8/17/98</u>		B506 Page 2 of 2	
GROUND ELEVATION <u>153.2</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. <u> </u> DATE <u> </u>					LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>42.8</u>	

DEPTH FT.	SAMPLE					SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.					
30	S7	25-21 19-20	2	0.7	SAND (SP). Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, light brown.		SAND		
					33.0'				
35	R1	3 min 7 min 9 min 10 min 10 min	5	4.8	GRANITE Fresh to slightly weathered, fractures spaced from 2" to 41" apart. Fractures dipping at 0, 10, and 45 degrees from the horizontal. RQD=93%.		BEDROCK		
40	R2	10 min 8 min 11 min 14 min 15 min /0.8	4.8	4.9	GRANITE Fresh to slightly weathered, fractures spaced from 1/2" to 20" apart. Fractures dipping at 0, 15, and 40 degrees from the horizontal. RQD=88%.				
					42.8'				
45					Bottom of Boring 42.8'				
50									
55									
60									

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V- GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>877+94 S 116</u>				DATE START - FINISH <u>11/18/98 - 11/18/98</u>		B601 Page 1 of 2	
GROUND ELEVATION <u>NM</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>		LOGGED BY <u>Brian F. Jankauskas</u>			
GROUND WATER EL. <u> </u> DATE <u> </u>				TOTAL DEPTH (Ft.) <u>30.5</u>			

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks	
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.					
<div style="display: flex; flex-direction: column; align-items: center;"> <div>5</div> <div>10</div> <div>15</div> <div>20</div> <div>25</div> <div>30</div> </div>	S1	1-1 5-4	2	0.3	SAND (SP) Narrowly graded. Mostly fine to medium sand, 10% rounded fine gravel, <5% non-plastic fines, brown, asphalt, FILL.		FILL		
	S2	10-17	1.0	0.4	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine sand, 20% fine angular gravel, 5% non-plastic fines, brown, roots, FILL.				
	S3	12-9 9-12	2	0	resample R=0.0', no sample				
	S4	11-15 17-13	2	0.1	SAND (SP) Narrowly graded. Mostly fine sand, 5% non-plastic fines, brown.		SAND AND GRAVEL WITH SAND		Pushing a rock
	S5	13-22 22-10	2	0.4	SAND (SP) Narrowly graded. Mostly fine sand, 5% non-plastic fines, 10% angular gravel, brown, roots.				
	S6	6-10 12-15	2	0	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown. resample R=0.1'				

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: The top 3 ft was dug out to set up the drill rig. Augered the first 5 ft Case (driven) wash from 5 to 30.5 ft
	Broad Street Parkway
	Φ GEI Consultants, Inc. Project 98217

BORING LOCATION <u>877+94 S 116</u>					DATE START - FINISH <u>11/18/98 - 11/18/98</u>			B601	
GROUND ELEVATION <u>NM</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>				
GROUND WATER EL. <u> </u> DATE <u> </u>					LOGGED BY <u>Brian F. Jankauskas</u>			TOTAL DEPTH (Ft.) <u>30.5</u>	
								Page 2 of 2	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
	S7	100	0.3	0.1	GRAVEL WITH SAND (GP) Narrowly graded. Mostly angular fine gravel, 25% medium to coarse sand, <5% non-plastic fines, gray-brown. 30.5'			Rolled for 20 min 0.2'
					Bottom of Boring 30.5'			
5								
10								
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>876+00 S 112</u>				DATE START - FINISH <u>11/19/98 - 11/19/98</u>				B603	
GROUND ELEVATION <u>NM</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>				Page 1 of 2	
GROUND WATER EL. DATE				LOGGED BY <u>Brian F. Jankauskas</u>					
				TOTAL DEPTH (Ft.) <u>32.0</u>					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 8 IN.	PEN ft.	REC ft.				
5	S1	5-12 6-3	2	0.3	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~20% non-plastic fines, black, small pieces of brick.		FILL	Resample R=1.3'
	S2	1-1 1-0	2	0.2	GRAVEL WITH SAND (GP) Narrowly graded. Mostly rounded to sub-angular gravel, ~30% fine to medium sand, 5% non-plastic fines, black, coal ash.			
10	S3	2-1 2-1	2	0.4	SAND (SP) Narrowly graded. Mostly fine to medium sand, 5% non-plastic fines, <5% coal, brown.			
15	S4	3-2 3-2	2	0	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 15% rounded gravel, <5% non-plastic fines, brown.		SAND AND SAND WITH GRAVEL	
20	S5	5-5 6-7	2	0.5	SAND (SP) Narrowly graded. Mostly fine sand, 5% non-plastic fines, brown.			
25	S6	7-10 13-15	2	0.5	SAND (SP) Narrowly graded. Mostly fine sand, 5% non-plastic fines, brown.			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: Augered the first 5 ft Case (driven) wash from 5 to 32 ft
	Broad Street Parkway
	Φ GEI Consultants, Inc. Project 98217

BORING LOCATION <u>876+00 S 112</u>					DATE START - FINISH <u>11/19/98 - 11/19/98</u>		B603	
GROUND ELEVATION <u>NM</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. <u> </u> DATE <u> </u>					LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>32.0</u>	
Page 2 of 2								

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
	S7	6-10 14-19	2	0.6	SAND WITH SILT (SP_SM) Narrowly graded. Mostly fine sand, 10% non-plastic fines, brown.			
					32.0'			
					Bottom of Boring 32.0'			
5								
10								
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANEn Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> <div>Broad Street Parkway</div> <div>Φ GEI Consultants, Inc. Project 98217</div> </div>
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BORING LOCATION <u>560+96: Lt 23'</u>				DATE START - FINISH <u>10/22/98 - 10/26/98</u>				B801			
GROUND ELEVATION <u>150.8</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>							
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>60.5</u>			
DEPTH FT.		SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks		
		TYPE & NO.	BLOWS / 6 IN.	PEN #	REC #						
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">5</div> <div style="margin-bottom: 20px;">10</div> <div style="margin-bottom: 20px;">15</div> <div style="margin-bottom: 20px;">20</div> <div style="margin-bottom: 20px;">25</div> <div>30</div> </div>	S1	1-2 2-8	2	0.6	Top 0.2'- TOPSOIL 0.2' Bottom 0.4'- SAND (SP) Narrowly graded. Mostly fine sand, 5% Non-plastic fines some roots, brown, FILL						
	S2	3-2 2-1	2	0.6	SAND (SP) Narrowly graded. Mostly fine to medium sand, ~20% brick/cinders, 5% Non-plastic fines, brown, FILL					FILL	
	S3	3-2 1-2	2	0.4	CINDERS/SLAG WITH SAND Mostly cinders and slag, ~40% medium sand, black, FILL						
	S4	1-1 3-4	2	0.4	SAND (SP) Narrowly graded. Mostly fine sand, ~5% cinders, 5% rounded fine gravel, 5% Non-plastic fines, dark brown 17'						
	S5	4-3 4-3	2	0.6	SAND (SP) Narrowly graded. Mostly fine sand, <5% Non-plastic fines, brown					SAND AND SILTY SAND	
	S6	4-5 6-5	2	0.5	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% Non-plastic fines, brown						
BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER						Notes: Case (drive) wash boring <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>					

BORING LOCATION <u>560+96, Lt 23'</u>				DATE START - FINISH <u>10/22/98 - 10/26/98</u>				B801 Page 2 of 3	
GROUND ELEVATION <u>150.8</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. _____ DATE _____				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>60.5</u>	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks	
	TYPE & NO.	BLOWS / 6 IN.	PEN ft	REC ft					
30	S7	9-13 11-11	2	0.6	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic, brown		SAND AND SILTY SAND		
35	S8	10-10 10-12	2	1.0	SILTY SAND (SM) Narrowly graded. Mostly fine sand, 15% non-plastic fines, brown				
40	S9	14-13 14-17	2	0.6	SAND (SW) Widely graded. Mostly fine to coarse sand, 10% sub-rounded fine gravel, <5% non-plastic fines, brown				
45	S10	6-4 5-7	2	0.3	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown				
50	S11	33-26 20-24	2	0.6	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 35% angular fine gravel, 5% non-plastic fines, top 0.2' rusty brown, bottom 0.4' gray/brown		SAND WITH GRAVEL		
55	S12	23-19 18-11	2	0.9	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~20% non-plastic fines, 5% rounded gravel, brown		SILTY SAND		
60									Casing refusal at 60'

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <input checked="" type="checkbox"/> GROUND WATER	Notes: <div style="text-align: right;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>560+96; Lt. 23'</u>		DATE START - FINISH <u>10/22/98 - 10/26/98</u>		B801	
GROUND ELEVATION <u>150.8</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>		TOTAL DEPTH (Ft.) <u>60.5</u>	
GROUND WATER EL. _____ DATE _____		LOGGED BY <u>Brian F. Jankauskas</u>		Page 3 of 3	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS 6 IN.	PEN ft.	REC ft.				
60					Roller bit from 60' to 60.5' Cobble or Possible Bedrock 60.5'		P-BEDROCK	
					Bottom of Boring 60.5'			
65								
70								
75								
80								
85								
90								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A
 2.0 IN. OD SPLIT SPOON SAMPLER
 WOR-WEIGHT OF RODS
 WOH-WEIGHT OF RODS AND HAMMER
 PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 REC-LENGTH OF RECOVERED SAMPLE
 RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED. %
 S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER
 U-UNDISTURBED SAMPLE V GROUND WATER

Notes:

Broad Street Parkway

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 Project 98217

BORING LOCATION <u>560+94; Rt 33'</u>		DATE START - FINISH <u>10/21/98- 10/22/98</u>		B802	
GROUND ELEVATION <u>151.2</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>		Page 1 of 3	
GROUND WATER EL. <u> </u> DATE <u> </u>		LOGGED BY <u>Brian F. Jankauskas</u>			
		TOTAL DEPTH (Ft.) <u>73.0</u>			

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.				
0	S1	1-2 3-10	2	1.2	UPPER 0.7'-TOPSOIL MIDDLE 0.3'- SAND (SP) Narrowly graded. Mostly fine sand, 5% Non-plastic fines, ~10% ash, FILL. BOTTOM 0.2'- SAND (SP) Narrowly graded. mostly fine sand, 5% non-plastic fines, brown.	1.0' 1.5'	TOPSOIL FILL	
5	S2	5-3 3-2	2	0.4	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~40% non-plastic fines, brown with dark brown stratification.			
10	S3	3-2 3-3	2	0.5	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown.			
15	S4	6-8 8-7	2	0.5	SAND (SP) Narrowly graded. Mostly fine sand, 5% non-plastic fines, brown.		SAND AND SILTY SAND	
20	S5	15-10 9-11	2	0.4	SIMILAR TO S4, 10% fine gravel.			
25	S6	11-14 19-18	2	0.6	SIMILAR TO S4.			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Cased (driven) wash boring <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>560+94: Rt 33</u>				DATE START - FINISH <u>10/21/98-10/22/98</u>				B802	
GROUND ELEVATION <u>151.2</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>				Page 2 of 3	
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>					
				TOTAL DEPTH (Ft.) <u>73.0</u>					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
30	S7	8-12 13-14	2	0.7	SAND (SP) Narrowly graded. Mostly fine to medium sand, 5% non-plastic fines, brown.			
35	S8	11-12 20-21	2	0.8	Similar to S7.		SAND	
40	S9	10-20 19-19	2	0.7	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown.			
45	S10	21-24 22-21	2	0.8	SAND (SW) Widely graded sand. Mostly fine to coarse sand, 5% non-plastic fines, 5% fine gravel, brown.			
50	S11 R1	60 2 min 3 min 4 min 4 min 4 min	0.5 5.1	0.3 2.7	GRAVEL WITH SAND (GP) Narrowly graded. Mostly fine angular gravel, ~40% medium to coarse sand, <5% non-plastic fines, brown. Boulders and Cobbles.		GRAVEL WITH SAND AND BOULDERS /COBBLES	
55								
56.6	S12	90 16/0.1	0.6	0.4	GRAVEL WITH SAND (SP) Narrowly graded. Mostly sub- rounded to angular fine gravel, ~20% fine to coarse sand, 5% non-plastic fines, gray.			
60							GLACIAL TILL	

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>560+94; Rt 33</u>	DATE START - FINISH <u>10/21/98 - 10/22/98</u>	B802
GROUND ELEVATION <u>151.2</u> DATUM <u>NGVD</u>	DRILLED BY <u>Maine Test Boring</u>	Page 3 of 3
GROUND WATER EL. _____ DATE _____	LOGGED BY <u>Brian F. Jankauskas</u>	
TOTAL DEPTH (Ft.) <u>73.0</u>		

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
60	S13	32-76 100- 111/ 0.3	1.8	1.1	SILTY SAND WITH GRAVEL (SP) Mostly fine sand, 15% non-plastic fines, 15% fine angular gravel, brown. 61.8'		GLACIAL TILL	
63.0	R2	3 min 3 min 2 min 4 min	4.0	3.4	GRANITE Fractures spaced from 1" to 3" apart, dipping at 40, 50, 70, and 80 degrees from the horizontal. Upper 1.5' is slightly weathered with discoloration and multiple fractures. Lower 1.9' is unweathered. RQD = 8%.			
65								
	R3	4 min 3 min 3 min 4 min 2 min/0.2	4.2	4.1	GRANITE Fractures spaced from about 1" to 7" apart, dipping at 20, 30, 40, 50, 60 and 70 degrees from the horizontal. Slightly weathered. RQD = 42%.		BEDROCK	
70								
	R4	3 min 2 min/0.8	1.8	1.7	GRANITE Fractures spaced from 1" to 7" apart, dipping at 0, 40, 60, 70 and 90 degrees from the horizontal. Near vertical 15" long fracture. Slightly weathered. RQD=64%. 73.0'			
					Bottom of Boring 73.0'			
75								
80								
85								
90								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V- GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>560+22; Lt. 16'</u>				DATE START - FINISH <u>10/14/98-10/14/98</u>				B803	
GROUND ELEVATION <u>107.3</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>18.8</u>	
Page 1 of 1									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	WOR WOR WOH WOH	2	0.1	SAND (SP) Narrowly graded. Mostly fine sand. 5% non-plastic fines, metal, dark brown. fill		FILL	
					4.0'			
5	S2	35-30 25-23	2	0.8	SILTY SAND WITH GRAVEL (SM) Narrowly graded. Mostly fine sand. 25% fine gravel, angular to round. 15% non-plastic fines, brown. Glacial till.		GLACIAL TILL	
					9.1'			
9.2	R1	3 min	0.3	0.3	GRANITE No fractures, unweathered.		BEDROCK	
9.5	R2	7 min	4.8	4.0	GRANITE Fractures spaced from 1" to 12" apart, dipping at 20,30,40, and 80 degrees from the horizontal, Upper 1.8' and Lower 0.8' unweathered. Middle 1.4' slightly weathered. RQD=42%.			
10		3 min						
		2 min						
14.3	R2	4 min	4.6	4.1	GRANITE Fractures spaced from 2" to 31" apart, dipping at 0 and 50 degrees from the horizontal. Upper 2.5' and Lower 1.3' unweathered. Middle 0.3' slightly weathered. RQD=74%.			
15		2 min						
		3 min						
		2 min						
		2 min						
		0.6						
18.9					18.9'			
20					Bottom of Boring 18.9'			
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Cased (driven) wash boring. Water 9.1'deep.
	Broad Street Parkway
	Φ GEI Consultants, Inc. Project 98217

BORING LOCATION <u>559+54; R131</u>				DATE START - FINISH <u>10/14/98</u>				B804	
GROUND ELEVATION <u>106.3</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. _____ DATE _____				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>12.1</u>	
Page 1 of 1									

DEPTH FT	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 8 IN.	PEN ft.	REC ft.				
0	S1	WOR -22 10-5	2	0.8	SILTY SAND WITH GRAVEL (SM) Narrowly graded. Mostly fine sand, 30% non-plastic fines. 20% fine angular gravel, some organics, brown and black.		SILTY SAND WITH GRAVEL	
5					5.0'			
	S2	58-14 20-17	2	0.8	SAND WITH SILT AND GRAVEL (SP-SM) Narrowly graded. Mostly fine to medium sand, 10% non-plastic fines, 25% angular gravel, brown, glacial till.		GLACIAL TILL	
10					10.3'			
					Roller bit from 10.3' to 12.1', boulder or possible bedrock.		POSSIBLE BEDROCK	
					12.1'			
					Bottom of Boring 12.1'			

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Cased (driven) wash boring. Water 10.1' deep.
	Broad Street Parkway
	Φ GEI Consultants, Inc. Project 98217

BORING LOCATION <u>558+84: Lt 19'</u>					DATE START - FINISH <u>10/14/98 - 10/14/98</u>			B805	
GROUND ELEVATION <u>103.9</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>				
GROUND WATER EL. <u> </u> DATE <u> </u>					LOGGED BY <u>Brian F. Jankauskas</u>			TOTAL DEPTH (Ft.) <u>5.1</u>	
Page 1 of 1									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 8 IN.	PEN ft.	REC ft.				
0	S1	19-9 5-7	2	0.6	Upper 0.2' - SAND (SW) Widely graded. Mostly fine to coarse sand, 5% non-plastic fines, dark brown. 0.5'		SAND	Gravel lodged in tip of spoon
					Lower 0.4' - SILTY SAND WITH GRAVEL (SM) Narrowly graded, mostly fine sand, 15% non-plastic fines, light brown. Fractured.		SILTY SAND WITH GRAVEL	
					Sand and Gravel in cuttings 4.8'			
5					Roller bit from 4.8' to 5.1', cobble/boulder or possible bedrock 5.1'		POSSIBLE BEDROCK	
					Bottom of Boring 5.1'			
10								
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <input checked="" type="checkbox"/> GROUND WATER	Notes: Cased (drive) wash boring. Water 12.5' deep.
	Broad Street Parkway
	GEI Consultants, Inc. Project 98217

YBORING LOCATION <u>558+14; Rt 29'</u>		DATE START - FINISH <u>10/15/98-10/15/98</u>		B806	
GROUND ELEVATION <u>103.9</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. _____ DATE _____		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>27.6</u>	
Page 1 of 1					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	18-58 16-15	2	0.4	SILTY SAND WITH GRAVEL (SM) Narrowly graded. Mostly fine sand, ~35% non-plastic fines, 20% fine subrounded gravel, dark brown, some organics.		SILTY SAND AND SILTY SAND WITH GRAVEL	
5	S2	19-16 13-14	2	0.9	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~30% non-plastic fines, 10% fine angular gravel, grayish brown.			
10	S3	8-13 11-21	2	1.7	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~25% non-plastic fines, 10% subrounded gravel, grayish brown. Tougher drilling - Possible glacial till layer. 12'			
15	R1	5 min 3 min 2 min	2.5	1.1	Boulders/Cobbles and Gravel.		GLACIAL TILL	
17.5	R2	3 min 3 min 3 min 5 min	4	2.6	17.8'			
20					GRANITE Fractures dipping at 0, 30, 40, 60, and 70 degrees from the horizontal, spaced from 1" to 12" apart. Slightly weathered. Multiple fractures in the middle 9". RQD=51.3%.		BEDROCK	
21.6	R3	4 min 2 min /0.5	1.5	2.7	GRANITE Fractures dipping at 40 and 50 degrees from the horizontal spaced from 4" to 12" apart. Slightly weathered. RQD=100%.			
23.1	R4	2 min 2 min 2 min 1 min /0.5	4.5	3.9	GRANITE Fractures dipping at 10, 20, 30, 50, and 60 degrees from the horizontal, spaced up to 18" apart. Slightly weathered. RQD=50%.			
25								
27.6					27.6'			
					Bottom of Boring 27.6'			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Cased (driven) wash boring. Water 12.5' deep.
	Broad Street Parkway
	Φ GEI Consultants, Inc. Project 98217

BORING LOCATION <u>557+46; Lt 11'</u>				DATE START - FINISH <u>11/9/98 - 11/10/98</u>				B807	
GROUND ELEVATION <u>124.1</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. _____ DATE _____				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>37.9</u>	
Page 1 of 2									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
5	S1	1-7 23-53	2	1.7	Upper 0.6' - TOPSOIL Middle 0.4' - SILTY SAND (SM) Narrowly graded. Mostly fine sand, 20% non-plastic fines, orange brown, FILL. Lower 0.7' - SAND (SP) Narrowly graded. Mostly fine sand, 5% fine gravel, 5% non-plastic fines, brown, FILL.		TOPSOIL	
	S2	7-7 5-4	2	1.9	SAND WITH SILT (SP-SM) Narrowly graded. Mostly fine sand, 10% non-plastic fines, coal, brown to grey, FILL.		FILL	
	S3	3-1 2-2	2	0	No sample, No recovery.			
10					13.9'			
15	S4	118	0.5	0.4	SAND (SP) Narrowly graded. Mostly fine to medium sand, 5% sub-angular gravel, <5% non-plastic fines, brown		SAND AND SAND WITH SILT	
	R1	5 min 4 min 1 min	3	2	Cobbles and gravel ranging from 3" to 14" in diameter.			
19.4 20	S5	6-8 14-10	2		SAND WITH SILT (SP-SM) Narrowly graded. Mostly fine to medium sand, 10% non-plastic fines, 5% angular fine gravel, brown			
21.4					~26'			
25								
25.3	S6	9-22 83-43	2	1.0	Upper 0.3' - SILTY SAND WITH GRAVEL (SM) Narrowly graded, Mostly fine sand, ~30-35% non-plastic fines, 15% rounded fine gravel, brown. GLACIAL TILL		GLACIAL TILL	
27.3					Lower 0.7' - GRAVEL (GP) Fractured rock ~10% fine sand, <5% non-plastic fines, brown		BEDROCK	
	R2	5 min 3 min 2 min 3 min	4.9	4.5	GRANITE Upper 2.2' - Unweathered, Lower 2.3' - Slightly weathered Fractures dipping at 20, 30, 40, 50, and 60 degrees from the horizontal, spaced from 1" to 11" apart, RQD=65%.			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V- GROUND WATER	Notes: Auger boring 0-5' Cased (driven) wash boring from 5-16.2' Cased (spun) boring from 16.2 to 27.8' <div style="display: flex; justify-content: space-between;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>557+14; Lt 11'</u>				DATE START - FINISH <u>11/9/98 - 11/10/98</u>		B807	
GROUND ELEVATION <u>124.1</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. _____ DATE _____				LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>37.9</u>	
Page 2 of 2							

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.				
30		2 min /0.9'						
	R3	2 min 2 min 2 min 2 min 2 min	5	5	GRAY TWO-MICA GRANITE Slightly weathered. Fractures dipping at 10, 30, 50, and 70 degrees from the horizontal, spaced from 1" to 21" apart, RQD= 77%.		BEDROCK	
35								
					37.9'			
					Bottom of Boring 37.9'			
40								
45								
50								
55								
60								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V- GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 60%;">Broad Street Parkway</div> <div style="width: 35%; text-align: center;"> Φ GEI Consultants, Inc. Project 98217 </div> </div>
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BORING LOCATION <u>556+72; Rt 46'</u>				DATE START - FINISH <u>10/19/98-10/19/98</u>				B808	
GROUND ELEVATION <u>112.6</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>18.9</u>	
								Page 1 of 1	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.				
0	S1	1-4 2-17	2	0.4	SILTY GRAVEL (GM) Mostly fine angular gravel, 15% non-plastic fines, 10% fine sand, organics (leaves), odor, black.			Gravel lodged in spoon
5	S2	14-26 16-11	2	0.8	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 20% fine fractured gravel, 5% non-plastic fines, dark brown.		SILTY SAND/ GRAVEL AND SAND WITH GRAVEL	
10	S3	6-4 6-5	2	6.8	SILTY SAND (SM) Mostly fine sand, ~20% non-plastic fines, light brown.			
15	S4	9-10 12-17	2	0.5	SILTY SAND WITH GRAVEL (SM) Mostly fine sand, ~25% non-plastic fines, 15% fine to coarse gravel (one stone, coarse gravel), light brown. 17.0'			
					Silty sand in cuttings		GLACIAL TILL	
					18.6'			
					Roller bit from 18.6' to 18.9', Boulder or Possible Bedrock 18.9'		P-BEDROCK	Casing Refusal at 18.6'
20					Bottom of Boring 18.9'			
25								
30								


BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: Cased (driven) wash boring. Water 3.8' deep.
	Broad Street Parkway
	© GEI Consultants, Inc. Project 98217

BORING LOCATION <u>556+14; Lt 31'</u>		DATE START - FINISH <u>10/27/98-10/27/98</u>		B809	
GROUND ELEVATION <u>141.5</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>		Page 1 of 2	
GROUND WATER EL. <u>116.8</u> DATE <u>11/30/98</u>		LOGGED BY <u>Brian F. Jankauskas</u>			
		TOTAL DEPTH (Ft.) <u>41.7</u>			

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Equipment Installation
	TYPE & NO.	BLOWS / 6 IN.	PEN #	REC #				
	S1	7-7 5-4	2	1.1	Upper 0.3' - ASPHALT Lower 0.8' - SAND (SP) Narrowly graded. Mostly fine sand, 10% sub-angular fine gravel, 5% non-plastic fines, yellow brown, brick, FILL.	0.3'	ASPHALT	Stand Pipe (2.7' Stick-up) installed in 1' of concrete surface seal, PVC 0.2' below top of steel
5	S2	3-5 6-7	2	1.1	SILTY SAND (SM) Narrowly graded. Mostly fine sand, 20% non-plastic fines, dark brown to yellow brown, brick, FILL.		FILL	
10	S3	10-10 12-13	2	0.8	Upper 0.2' - SAND (SW) Widely graded. Mostly fine to coarse sand, 10% rounded fine gravel, <5% non-plastic fines, orange brown Lower 0.6' - SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown.	9.2'		Cuttings from 1' to 19'
15	S4	9-11 11-13	2	0.5	SAND (SP) Narrowly graded. Mostly fine sand, 5% non-plastic fines, brown		SAND	
20	S5	10-9 11-18	2	1.0	Similar to S4 Gravel lodged in tip of spoon			Filter sand from 19'-21.6'
25	S6	13-11 11-11	2	1.2	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~20% non-plastic fines, 5% rounded gravel, gray.	23.5'	SILTY SAND	Bentonite chips From 21.6' to 23.2'
30								1.5" ID PVC well screen from 25.5' to 35.5'
								Filter sand from 23.2' to 36'

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE U-GROUND WATER	Notes: Cased (drive) wash boring.
	Broad Street Parkway Φ GEI Consultants, Inc. Project 98217

BORING LOCATION <u>556+14; Lt 31'</u>				DATE START - FINISH <u>10/17/98 - 10/27/98</u>				B809	
GROUND ELEVATION <u>141.5</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u>116.8</u> DATE <u>11/30/98</u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>41.7</u>	
Page 2 of 2									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Equipment Installation
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
30	S7	12-12 11-13	2	1.0	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~20% non-plastic fines, 10% rounded fine gravel, gray		SILTY SAND	 Casing Refusal at 36.5' Rolled to 36.9' Bentonite chips from 36' to 41.7'
35	S8	24-7 44	1.5	0.4	GRAVEL WITH SAND (GP) Narrowly graded. Mostly angular fine gravel, 40% fine to coarse sand, <5% non-plastic fines, gray		GRAVEL WITH SAND AND BOULDERS	
36.9	R1	3 min	4.8	4.8	Upper 1.4' - Boulder from 36.5' to 38.3'			
40		3 min 4 min 3 min 2 min /0.8'			Lower 3.4' - GRANITE Slightly weathered, Fractures dipping at 20 and 40 degrees from the horizontal, spaced from 1" to 7" apart, RQD=42%		BEDROCK	
					Bottom of Boring 41.7'			
45								
50								
55								
60								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway © GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>555+34: Rt 21</u>				DATE START - FINISH <u>12/3/98 - 12/3/98</u>				B810	
GROUND ELEVATION <u>122.1</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>36.5</u>	
Page 1 of 2									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN N.	REC N.				
	S1	1-15 15-11	2	1	Upper 0.5' - TOPSOIL Lower 0.5' - SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 15% rounded and angular gravel, <5% non-plastic fines, brown, roots, FILL		TOPSOIL	Cuttings From 0 to 26'
5	S2	7-6 5-7	2	0.4	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 15% rounded fine gravel, 5% non-plastic fines, brown, brick, FILL		FILL	
10	S3	7-11 15-12	2	0.8	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 25% rounded to sub-angular gravel, <5% non-plastic fines, brown, FILL			
15	S4	61-48 56-49	2	1.1	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 25% rounded to angular fine gravel, 5% non-plastic fines, brown			
20	S5	21-17 15-14	2	0.3	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 15% rounded fine gravel, 5% non-plastic fines, brown		SAND, SAND WITH GRAVEL, AND SILTY SAND	
25					Boulder from 24.2' to 25.4'			Bentonite chips From 26' to 36.5'
26					Upper 0.4' - SAND (SW) Widely graded. Mostly fine to coarse sand, 5% fine gravel, <5% non-plastic fines, gray			
26.5	S6	80	0.5	0.5	Lower 0.1' - SILTY SAND (SM) Narrowly graded. Mostly fine, ~20% non-plastic fines, gray			
30	R1	2 min 2 min 2 min 2 min 1 min	5	4.0	GRANITE Slightly weathered. Fractures dipping at 10 and 40 degrees from the horizontal, spaced from 4" up to 20" apart, RQD= 80%			

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <input checked="" type="checkbox"/> GROUND WATER	Notes: Auger 0 to 5' Cased (driven) wash 5' to 26.5' <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION						DATE START - FINISH		B810
GROUND ELEVATION						DRILLED BY		
GROUND WATER EL.						LOGGED BY		TOTAL DEPTH (Ft.)
								Page 2 of 2
DEPTH FT.	SAMPLE TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.	SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
30	R2	1 min 1 min 1 min 1 min	5	5.1	GRANITE Slightly weathered. Fractures dipping at 20 and 40 degrees from the horizontal, spaced from 5" up to 14" apart, RQD=100%		BEDROCK	
35								
					Bottom of Boring 36.5'			
40								
45								
50								
55								
60								

Notes:

- BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER
- WOR-WEIGHT OF RODS
- WOH-WEIGHT OF RODS AND HAMMER
- PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL
- REC-LENGTH OF RECOVERED SAMPLE
- RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, %
- S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER
- U-UNDISTURBED SAMPLE V GROUND WATER

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Project 98217

BORING LOCATION <u>554+64; Lt 29'</u>				DATE START - FINISH <u>11/10/98 - 11/10/98</u>				B811 Page 1 of 2	
GROUND ELEVATION <u>144.5</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>54.2</u>	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN #	REC #				
					ASPHALT 0.2'		ASPHALT	
	S1	5-6 5-4	2	1.1	Upper 0.4' - SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown/black, FILL. 1.3'		FILL	
					Lower 0.7' - Similar to above but brown.			
5	S2	4-5 7-7	2	1.3	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~25% non-plastic fines, brown			
10	S3	8-12 12-15	2	0.8	Similar to S2			
15	S4	10-13 14-15	2	0.9	Similar to S2			
20	S5	13-17 19-22	2	0.6	Similar to S2			
25	S6	18-13 14-13	2	0.8	Upper 0.5' - Similar to S2 Lower 0.3' - SAND (SP) Narrowly graded. Mostly fine to medium sand, 5% non-plastic fines, brown			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V- GROUND WATER	Notes: Auger 0 to 5' Cased (driven) wash 5' to 54.2'
	Broad Street Parkway

Φ GEI Consultants, Inc.
Project 98217

BORING LOCATION <u>554+64; Lt 29'</u>		DATE START - FINISH <u>11/10/98 - 11/10/98</u>		B811	
GROUND ELEVATION <u>144.5</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. <u> </u> DATE <u> </u>		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>54.2</u>	
Page 2 of 2					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
30	S7	9-11 12-14	2	0.5	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown		SILTY SAND AND SAND	
					34.4'			
35	S8	25-44 20-20	2	0.5	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 15% sub-angular and rounded gravel, <5% non-plastic fines, brown		SAND WITH GRAVEL	Gravel lodged in tip of spoon
					39'			
40	S9	25-22 32-40	2	1.1	SILTY SAND WITH GRAVEL (SM) Narrowly graded. Mostly fine sand, 15% non-plastic fines, 15% rounded gravel, brown. Glacial till.		GLACIAL TILL	Gravel lodged in tip of spoon
					48.5'			
45					Cobble 44.7' to 45.3'			
45.4	S10	14-30 57-49	2	1.1	SAND WITH SILT AND GRAVEL (SP-SM) Narrowly graded. Mostly fine sand, 15% rounded to fractured gravel, 10% non-plastic fines, brown. Glacial till.			
47.4					48.5'			
49.2	R1	3 min	5	4.9	GRANITE Slightly weathered. Fractures dipping at 20, 40, 50, and 60 degrees from the horizontal, spaced from 1" to 14" apart, RQD=60%		BEDROCK	
50		2 min						
		2 min						
		2 min						
		3 min						
					54.2'			
55					Bottom of Boring 54.2'			
60								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>553+99: Rt 49'</u>		DATE START - FINISH <u>10/20/98-10/20/98</u>		B812	
GROUND ELEVATION <u>109.4</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. _____ DATE _____		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>15.3</u>	
Page 1 of 1					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	WOH -2 4-3	2	2.3	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~40% non-plastic fines, some organics, dark brown.			
5	S2	8-4 12-11	2	0.4	SILTY SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine sand, 20% fine angular gravel, 15% non-plastic fines, brown.		SILTY SAND AND SILTY SAND WITH GRAVEL	
10	S3	13-10 6-9	2	1.0	SILTY SAND (SM) Narrowly graded. Mostly fine to medium sand, 15% non-plastic fines, brown.			
14.8'					14.8'			Casing refusal at 14.8'
15					Roller bit from 14.8' to 15.3'. Boulder or possible bedrock 15.3'		P-BEDROCK	
					Bottom of Boring 15.3'			
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE √ GROUND WATER	Notes: Cased (driven) wash boring. Water 7' deep.
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BORING LOCATION <u>553+24; Lt 4'</u>				DATE START - FINISH <u>12/4/98 - 12/4/98</u>				B813	
GROUND ELEVATION <u>125.9</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>28.0</u>	
								Page 1 of 1	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.				
	S1	1-3 6-7	2	0.2	TOPSOIL		TOPSOIL	
					1.5'			
5	S2	25-17 13-12	2	1.7	SAND WITH SILT (SP-SM) Narrowly graded. Mostly fine sand, 5-10% non-plastic fines, light brown			
10	S3	3-3 1- WOH	2	1.8	Similar to S2			
15							SILTY SAND, SAND WITH SILT, AND SILTY SAND WITH GRAVEL	
15.5	S4	3-5 16-32	2	0.3	SILTY SAND WITH GRAVEL (SM) Narrowly graded. Mostly fine sand, 25% rounded gravel, 15% non-plastic fines, brown			
17.5								
20								
20.5	S5	53-67 27-27	2	0.9	SAND WITH SILT (SP-SM) Narrowly graded. Mostly fine sand, 10% rounded and angular gravel, 10% non-plastic fines, brown			
22.5					~24'			
25	S6	9-27 14-10	2	0.7	Upper 0.4' - SAND (SP) Narrowly graded. Mostly fine to medium sand, 10% angular gravel, <5% non-plastic fines, gray brown 26.0'		SAND	
					Lower 0.3' - SILTY SAND (SM) Narrowly graded. Mostly fine sand, 15% non-plastic fines, 10% angular gravel, light brown. Glacial till 27.5'		GLACIAL TILL	
					Roller bit from 27.5' to 28.0', cobble or possible bedrock 28.0'		P-BEDROCK	
					Bottom of Boring 28.0'			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE U-GROUND WATER	Notes: Auger 0' to 5'. Cased (driven) wash boring 5' - 28'.
	Broad Street Parkway

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BORING LOCATION <u>552+50: Rt 46</u>				DATE START - FINISH <u>10/20/98</u>				B814	
GROUND ELEVATION <u>108.1</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>22.4</u>	
DEPTH FT.		SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCIP.	Remarks
		TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	WOH -1 1-3	2	0.4	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~25% non-plastic fines, dark brown. Some organics.		SILTY SAND		
5	S2	7-2 2-19	2	0.5	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~40% non-plastic fines, light brown, 10% coarse gravel.				
10	S3	9-20 8-8	2	0.6	SAND WITH SILT AND GRAVEL (SW-SM) Widely graded. Mostly fine to coarse sand, 20% angular gravel, 10% non-plastic fines, light brown.		SAND WITH SILT AND GRAVEL		
12.3	R1	3 min 2 min 2 min 1 min 2 min	5.1	4.4	GRANITE Fractures dipping at 0, 20, and 40 degrees from the horizontal, slightly weathered, spaced from 1" to 16" apart. RQD=75%		BEDROCK		
15									
17.4	R2	2 min 2 min 1 min 2 min 2 min	5.0	4.4	GRANITE Fractures dipping at 10, 20, and 80 degrees from the horizontal, spaced from 1" to 23" apart. The upper 2' and bottom 1.9' is unweathered, middle 0.4' is slightly weathered. RQD=80%				
20									
22.4					Bottom of Boring 22.4'				
25									
30									

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE √ GROUND WATER	Notes: Cased (driven) wash boring. Water 8.3' deep.
	Broad Street Parkway
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BORING LOCATION <u>551+78; Lt 18'</u>		DATE START - FINISH <u>10/28/98 - 10/28/98</u>		B815	
GROUND ELEVATION <u>146.3</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. <u>119.3</u> DATE <u>11/11/98</u>		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>61.8</u>	
Page 1 of 3					

DEPTH FT.	SAMPLE					SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Equipment Installation
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.					
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">5</div> <div style="margin-bottom: 20px;">10</div> <div style="margin-bottom: 20px;">15</div> <div style="margin-bottom: 20px;">20</div> <div style="margin-bottom: 20px;">25</div> <div style="margin-bottom: 20px;">30</div> </div>	S1	2-3 4-5	2	1.2	Upper 0.5' - TOPSOIL Lower 0.7' - SAND WITH SILT (SP-SM) Narrowly graded. Mostly fine sand, 10% non-plastic fines, yellow brown	0.8'	TOPSOIL	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">Stand pipe (2.3' stickup) installed 1' thick concrete surface seal. PVC is 0.1' below top of steel.</div> <div style="margin-bottom: 20px;">Filter sand from 1' to 4.4'</div> <div style="margin-bottom: 20px;">Cuttings from 4.4' to 21.3'</div> <div style="margin-bottom: 20px;">Filter sand From 21.3' to 23'</div> <div style="margin-bottom: 20px;">Bentonite chips from 23' to 25'</div> <div style="margin-bottom: 20px;">Filter sand from 25' to 49.4'</div> <div style="margin-bottom: 20px;">1.5" ID PVC screen from 27.8' to 37.8'</div> </div>	
						-3.5'			SAND WITH SILT
	S2	4-8 12-9	2	0.7	SILT (SM) Rapid dilatency. Thread could not be formed. ~40% fine gray brown				
	S3	9-13 12-13	2	0.8	Similar to S2				SILT
	S4	10-14 12-12	2	0.8	Similar to S2				
	S5	13-20 21-21	2	0.8	Similar to S2				
	S6	8-12 14-14	2	0.9	Similar to S2				

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: Cased (driven) wash boring. <div style="display: flex; justify-content: space-between;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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DEPTH		SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Equipment Installation
FT.		TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.				
30		S7	8-9 11-17	2	1.1	Similar to S2		SILT	1.5" ID PVC well screen from 27.8' to 37.8'
						33.3'			
35		S8	9-8 8-19	2	1.8	SILTY SAND (SM) Narrowly graded, Mostly fine sand, ~20% non-plastic fines, 5% rounded fine gravel, gray			
40		S9	14-18 26-24	2	0.8	SILTY SAND WITH GRAVEL (SM) Narrowly graded. Mostly fine sand, ~20% non-plastic fines, 20% rounded gravel, gray		SILTY SAND AND SILTY SAND WITH GRAVEL	
45		S10	16-26 24-23	2	1.1	SILTY SAND (SM) Narrowly graded, Mostly fine sand, ~20% non-plastic fines, 10% rounded fine gravel, gray			
50		S11	10-11 17-50/0.3	1.8	0.9	SILTY SAND WITH GRAVEL (SM) Narrowly graded. Mostly fine sand, ~20% non-plastic fines, 15% angular gravel, gray			
		R1	5 min 2 min 2 min 2 min 2 min	5	4.9	GRANITE Slightly weathered. Fractures dipping at 0, 10, 20, and 70 degrees from the horizontal, spaced from 1" to 27" apart, RQD= 80%			Bentonite Chips 49.4' to 61.8'
55						51.8'		BEDROCK	
56.8		R2	3 min 3 min 2 min 2 min 2 min	5	4.4	GRANITE Upper 3.6' - Unweathered, no fractures Lower 0.8' - Slightly weathered. Fractures dipping at 10 and 60 degrees from the horizontal, spaced from 1" to 5" apart, (multiple fractures), RQD=80%			
60									

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER

WOH-WEIGHT OF RODS

WOH-WEIGHT OF RODS AND HAMMER

PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC-LENGTH OF RECOVERED SAMPLE

RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, %

S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER

U-UNDISTURBED SAMPLE V GROUND WATER

Notes:

Broad Street Parkway

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BORING LOCATION		551+78; Lt 18'		DATE START - FINISH		10/28/98 - 10/28/98		B815	
GROUND ELEVATION		146.3		DATUM		NGVD		DRILLED BY	
GROUND WATER EL.		119.3		DATE		11/11/98		LOGGED BY	
								TOTAL DEPTH (Ft.) 61.8	
								Page 3 of 3	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Equipment Installation
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
					61.8'			
					Bottom of Boring 61.8'			
5								
10								
15								
20								
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A
 2.0 IN. OD SPLIT SPOON SAMPLER
 WOR-WEIGHT OF RODS
 WOH-WEIGHT OF RODS AND HAMMER
 PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 REC-LENGTH OF RECOVERED SAMPLE
 RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED. %
 S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER
 U-UNDISTURBED SAMPLE V GROUND WATER

Notes:

Broad Street Parkway

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BORING LOCATION <u>551+14; Rt 36</u>		DATE START - FINISH <u>12/8/98 - 12/8/98</u>		B816	
GROUND ELEVATION <u>128.3</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. <u> </u> DATE <u> </u>		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>42.2</u>	
Page 1 of 2					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
	S1	1-2 2-2	2	0.8	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown, roots			
	S6	3-3 4-5	2	0.6	SAND (SP) Narrowly graded. Mostly fine to medium sand, 5% fine rounded gravel, <5% non-plastic fines, brown		SAND	
5								
	S5	7-4 7-12	2	0.5	SAND (SW) Widely graded. 5% fine gravel, <5% non-plastic fines, brown			
10					~13.5'			
	S4	7-14 14-14	2	1.1	SILT (SM) Rapid dilatancy, thread could not be formed, ~40% fine sand, brown		SILT	
15					~19'			
	S5	23-25 28-22	2	1.1	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~20% non-plastic fines, 5% angular gravel, gray			
20								
	S6	14-18 17-17	2	1.0	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~20% non-plastic fines, 5% fine rounded gravel, light brown		SILTY SAND AND SAND WITH SILT AND GRAVEL	
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <input checked="" type="checkbox"/> GROUND WATER	Notes: Removed 3' of soil to set up drill rig. Auger 0' to 5' Cased (driven) wash boring 5' to 42.2'
Broad Street Parkway	

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BORING LOCATION <u>551+14; Rt 36</u>				DATE START - FINISH <u>12/8/98 - 12/8/98</u>				B816	
GROUND ELEVATION <u>128.3</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>42.2</u>	
								Page 2 of 2	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.				
30	S7	9-14 18-21	2	1.0	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~20% non-plastic fines, 5% rounded fine gravel, gray		SILTY SAND AND SAND WITH SILT AND GRAVEL	
35	S8	8-6 6-14	2	0.4	SAND WITH SILT AND GRAVEL (SP-SM) Narrowly graded. Mostly fine sand, 20% rounded coarse gravel, 10% non-plastic fines, gray			
40	S9	150 /0.3'	0.3	0	40.3'			
					Roller bit from 40.3' to 42.2', Boulder or Possible Bedrock 42.2'		POSSIBLE BEDROCK	Casing Refusal at 41.4'
					Bottom of Boring 42.2'			
45								
50								
55								
60								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 60%;">Broad Street Parkway</div> <div style="width: 35%; text-align: right;"> Φ GEI Consultants, Inc. Project 98217 </div> </div>
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BORING LOCATION <u>550+62; Rt 49</u>		DATE START - FINISH <u>12/8/98 - 12/8/98</u>		B817	
GROUND ELEVATION <u>126.6</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. <u> </u> DATE <u> </u>		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>59.0</u>	
Page 1 of 2					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
<div style="display: flex; flex-direction: column; align-items: center;"> <div>5</div> <div>10</div> <div>15</div> <div>20</div> <div>25</div> <div>30</div> </div>	S1	2-4 6-4	2	0.5	Upper 0.4' - TOPSOIL Lower 0.1' - SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 25% rounded coarse gravel, 5% non-plastic fines, brown, FILL	1.0'	TOPSOIL	
	S2	4-4 4-5	2	0.2	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown, glass, FILL		FILL	
	S3	2-4 6-8	2	1.1	SILT (ML) rapid dilatency, thread could not be formed, ~40% fine sand, brown			
	S4	11-15 18-22	2	1.0	Similar to S3		SILT	
	S5	15-14 17-20	2	1.1	Similar to S3			
	S6	20-14 21-21	2	0.9	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~25% non-plastic fines, gray		SILTY SAND	
					~8.5'			
					~23.5'			

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Cased (driven) wash boring <div style="display: flex; justify-content: space-between; align-items: center;"> <div>Broad Street Parkway</div> <div> Φ GEI Consultants, Inc. Project 98217 </div> </div>
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BORING LOCATION <u>550+62; Rt 49</u>		DATE START - FINISH <u>12/8/98 - 12/8/98</u>		B817	
GROUND ELEVATION <u>126.6</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. <u> </u> DATE <u> </u>		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>59.0</u>	
Page 2 of 2					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.				
30	S7	25-11 14-15	2	0.9	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~20% non-plastic fines, gray		SILTY SAND	
35	S8	29-22 26-17	2	0.7	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~25% non-plastic fines, 5% fine gravel, gray			
40	S9	32-21 46-73	2	0.9	SAND WITH SILT AND GRAVEL (SP-SM) Narrowly graded. Mostly fine sand, 30% sub-rounded and sub-angular gravel, 10% non-plastic fines, gray		GLACIAL TILL	
45	R1	1 min 1 min 1 min 1 min 1 min /0.5'	4.5	0.3	0.5' thick cobble at 44' SAND WITH SILT AND GRAVEL (SP-SM) Narrowly graded. Mostly fine to medium sand, 15% sub-angular gravel, 10% non-plastic fines, gray (classification based on a sample collected from collapsed borehole after coring, sample depth 46' to 48')			
49	R2	2 min 2 min 2 min 2 min 2 min	5	5	GRANITE Slightly weathered. Fractures dipping at 0, 10, 30, 40, 50, 60, and 80 degrees from the horizontal, spaced from 1" to 7" RQD=12%		BEDROCK	
54	R3	2 min 3 min 2 min 1 min /0.4'	3.4	3.4	GRANITE Slightly weathered. Fractures dipping at 30, 40, 50, and 80 degrees from the horizontal, spaced from 1" to 7" apart, RQD=27%			
57.4	R4	2 min /0.6 3 min	1.6	1.6	GRANITE Slightly weathered. Fractures dipping at 50 and 60 degrees from the horizontal, spaced from 1" to 7" apart, RQD=63%			
60					Bottom of Boring 59.0'			

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 60%;">Broad Street Parkway</div> <div style="width: 35%; text-align: right;"> Φ GEI Consultants, Inc. Project 98217 </div> </div>
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BORING LOCATION <u>550+41; Lt 21'</u>		DATE START - FINISH <u>10/29/98 - 10/29/98</u>		B818	
GROUND ELEVATION <u>162.0</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. <u> </u> DATE <u> </u>		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>84.9</u>	
Page 1 of 3					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
5	S1	5-3 3	1.5	0.2	SAND WITH GRAVEL (SW) Mostly sand. 15% fine angular gravel, <5% non-plastic fines, brown, FILL.		FILL	
					4.0'			
	S2	2-3 5	1.5	0.7	SAND WITH SILT (SP-SM) Narrowly graded. Mostly fine sand, 10% non-plastic fines, brown		SAND WITH SILT	
10	S3	9-11 12	1.5	0.7	SILT (ML) rapid dilatency, thread could not be formed, ~40% fine sand, brown			
					8'			
15	S4	12-14 14-15	2	0.8	Similar to S3		SILT AND SILTY SAND	
20	S5	15-17 18-24	2	0.9	Similar to S3			
25	S6	20-18 29-27	2	0.8	Similar to S3			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Cased (driven) wash boring <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 60%;">Broad Street Parkway</div> <div style="width: 35%; text-align: right;"> GEI Consultants, Inc. Project 98217 </div> </div>
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BORING LOCATION <u>550+41; Lt 21'</u>		DATE START - FINISH <u>10/29/98 - 10/29/98</u>		B818	
GROUND ELEVATION <u>162.0</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. _____ DATE _____		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>84.9</u>	
Page 2 of 3					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
30	S7	27-29 38-35	2	0.9	Similar to S3			
35	S8	27-25 31-35	2	0.8	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~35% non-plastic fines, brown		SILT AND SILTY SAND	
40	S9	25-22 27-27	2	0.8	Similar to S3, ~30% fine sand orange in the lower 0.2'			
45	S10	20-18 25-30	2	0.8	Similar to S3, ~45% fine sand			
50	S11	14-17 21-25	2	0.9	Upper 0.2' - Similar to S3 Bottom 0.7' - SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown to orange	50.5'		
55	S12	31-44 70 /0.2'	1.2	0.8	SAND (SP) Narrowly graded. Mostly fine to medium sand, 10% fine rounded gravel, 5% non-plastic fines, brown to orange Cobble from 56.2' to 56.5'	57'	SAND	
60							SILTY SAND	

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>550+41; Lt 21'</u>				DATE START - FINISH <u>10/29/98 - 10/29/98</u>				B818 Page 3 of 3	
GROUND ELEVATION <u>162.0</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>84.9</u>	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
60	S13	25-22 20-23	2	1.2	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~25% non-plastic fines, gray		SILTY SAND	
65	S14	12-17 20-22	2	1.0	Similar to S13			
70	S15	18-22 22-14	2	1.1	Similar to S13			
75	S16	55/0.1'	0.1	0	Cobbles from 75.1' to 75.5' and 75.8' to 76.3' Cobble from 79.0 to 79.3		GLACIAL TILL	
80	S17	58-100 100 /0.2'	1.2	1.0	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~30 non-plastic fines, gray. Glacial till. Roller bit from 83.1' to 84.9', boulder or possible bedrock			
85					Bottom of Boring 84.9'		POSSIBLE BEDROCK	
90								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center; padding-top: 20px;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION						DATE START - FINISH		B1001	
GROUND ELEVATION						DRILLED BY			
GROUND WATER EL.						LOGGED BY		TOTAL DEPTH	
								(Ft.)	
DEPTH						SOIL AND ROCK DESCRIPTIONS		FIELD TESTS	
SAMPLE						STRATUM DESCRIP.		Equipment Installation	
TYPE & NO.									
BLOWS / 6 IN.									
PEN ft.									
REC ft.									
0	S1	14-15 13-13	2	1.2	0.35' Asphalt SAND (SP) Narrowly graded. Mostly fine sand, ~15% medium sand, 15% coarse sand, <5% non-plastic fines, brown. FILL.	0.35'		Asphalt	Flush-mount road-box in 1-inch-thick concrete surface seal installed.
5	S2	3-3 3-4	2	0.9	Upper 0.3' SAND (SW) Widely graded. Mostly fine to coarse sand, <5% fines, brown. FILL.	5.3'		FILL	
10	S3	22-22 19-23	2	0.8	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 35% fine gravel, brown.				
15	S4	8-7 9-11	2	0.7	SAND (SP) Narrowly graded. Mostly medium sand, ~15% fine sand, <5% non-plastic fines, 10% gravel, brown.			SAND AND SAND WITH GRAVEL	
20	S5	13-15 16-22	2	0.5	SAND (SP) Narrowly graded. Mostly fine to medium sand, <10% non-plastic fines, brown.				
25	S6	13-17 26-29	2	0.9	SAND (SP) Narrowly graded. Mostly fine sand, ~5% non-plastic fines, brown.				
30									Bentonite from 26.9' to 28.1'. Filter sand from 28.1' to 48.4'.

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER

WOR-WEIGHT OF RODS

WOH-WEIGHT OF RODS AND HAMMER

PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC-LENGTH OF RECOVERED SAMPLE

RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, %

S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER

U-UNDISTURBED SAMPLE V GROUND WATER

Notes:

Cased (drive) wash boring.

Broad Street Parkway

GEI Consultants, Inc.
Project 98217

BORING LOCATION <u>651+75 19S</u>				DATE START - FINISH <u>8/5/98 - 8/6/98</u>				B1001	
GROUND ELEVATION <u>189.82</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u><130.2</u> DATE <u>9/10/98</u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>105.1</u>	
		Page 2 of 4							

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Equipment Installation
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
30	S7	15-24 30-38	2	0.9	SAND (SP) Narrowly graded. Mostly fine sand, ~5% non-plastic fines, light brown to orange.			<div style="border-left: 1px dashed black; padding-left: 5px;"> 1 1/2" ID PVC well screen from 29.6' to 39.6'. </div> <div style="border-left: 1px dashed black; padding-left: 5px; margin-top: 100px;"> Backfill boring with filter sand from 28.1' to 48.4'. </div> <div style="border-left: 1px dashed black; padding-left: 5px; margin-top: 100px;"> Allow boring to collapse below 48.4'. </div>
35	S8	33-56 49-45	2	0.7	SAND (SP) Narrowly graded. Mostly fine sand. ~5% non-plastic fines, dark gray, light gray, light brown, brown stratification at uneven thicknesses.			
40	S9	33-43 53-56	2	0.9	Similar to S8.			
45	S10	29-36 43-39	2	0.7	Similar to S8, but gray/brown.		SAND AND SAND WITH GRAVEL	
50	S11	31-31 29-32	2	0				
	S12		2	0.9	Similar to S8, but gray/brown. (S12 driven at same depth as S11 to obtain sample for classification.)			
55	S13	15-11 13-14	2	1.4	Similar to S8.			
60								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: <div style="border: 1px solid black; padding: 5px; text-align: center;"> Broad Street Parkway </div>
	ϕ GEI Consultants, Inc. Project 98217

BORING LOCATION <u>651+75.19S</u>				DATE START - FINISH <u>8/5/98 - 8/6/98</u>		B1001	
GROUND ELEVATION <u>169.82</u>		DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. <u><130.2</u>		DATE <u>9/10/98</u>		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>105.1</u>	
Page 3 of 4							

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS ¹⁾	STRATUM DESCRIP.	Equipment Installation
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.				
60	S14	15-12 12-12	2	1.5	Similar to S8.			
65	S15	11-14 13-13	2	1.3	Similar to S8.		SAND AND SAND WITH GRAVEL	
70	S16	20-22 22-29	2	0.9	Similar to S8.			
75	S17	20-23 31-38	2	0.8	Similar to S8.			
80	S18	40-34 35-35	2	1.0	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine sand, 20% fine angular gravel, <5% non-plastic fines, light brown with 1/8" thick orange stratification.			
85	S19	31-23 26-32	2	1.2	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, 5% fine angular gravel, light brown.			
90								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> <div>Broad Street Parkway</div> <div>Φ GEI Consultants, Inc. Project 98217</div> </div>
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BORING LOCATION <u>651+75 19S</u>	DATE START - FINISH <u>8/5/98- 8/6/98</u>	B1001
GROUND ELEVATION <u>169.82</u> DATUM <u>NGVD</u>	DRILLED BY <u>Maine Test Boring</u>	TOTAL DEPTH (Ft.) <u>105.1</u>
GROUND WATER EL. <u><130.2</u> DATE <u>9/10/98</u>	LOGGED BY <u>Brian F. Jankauskas</u>	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Equipment Installation
	TYPE & NO.	BLOWS / 6 IN.	PEN R	REC R				
90	S20	13-12 15-18	2	0.9	SAND WITH GRAVEL Narrowly graded . Mostly fine sand, 25% fine angular gravel, <5% non-plastic fines			
					93.1			
95 95.1	R1	7 min 7 min 9 min 8 min 9 min /0.8	5	4.8	GRAY TWO-MICA GRANITE Slightly weathered fractures spaced uneven distances up to 10" apart, fractures dipping at 0, 5, 10, 20, 45, 60 degrees from the horizontal. RQD=48.6%		BEDROCK	
100 100.1	R2	7 min 7 min 6 min 7 min 8 min	5.2	5	GRAY TWO-MICA GRANITE Slightly weathered fractures spaced uneven distances up to 11" apart, fractures dipping at 0, 30, 45, 60, 80 degrees from the horizontal. RQD=70.5%			
105					105.1			
					Bottom of Boring 105.1			
110								
115								
120								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A
 2.0 IN. OD SPLIT SPOON SAMPLER
 WOR-WEIGHT OF RODS
 WOH-WEIGHT OF RODS AND HAMMER
 PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 REC-LENGTH OF RECOVERED SAMPLE
 RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED. %
 S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER
 U-UNDISTURBED SAMPLE √ GROUND WATER

Notes:

Broad Street Parkway

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BORING LOCATION <u>651+10.40N</u>					DATE START - FINISH <u>8/11/98-8/12/98</u>			B1002	
GROUND ELEVATION <u>159.4</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>				
GROUND WATER EL. <u> </u> DATE <u> </u>					LOGGED BY <u>Brian F. Jankauskas</u>			TOTAL DEPTH (Ft.) <u>81.7</u>	
Page 1 of 3									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 8 IN.	PEN ft.	REC ft.				
0	S1	1-1 1-1	2	0.7	Upper 0.5' - TOPSOIL, leaves and sticks Lower 0.2' - SAND (SP) Narrowly graded, Mostly fine sand. <5% fines, brown.		TOPSOIL	
5	S2	16-15 22-21	2	0	No recovery, (stone in tip of spoon).			
	S3	16 15-19	1.5	1.0	SAND WITH GRAVEL (SW) Widely graded. Mostly medium to coarse sand, 25% subangular gravel. <5% non-plastic fines, brown.			
10	S4	14-7 6-8	2	1.0	Upper 0.2' - Similar to S3. Lower 0.8' - SAND (SP) Narrowly graded. Mostly medium sand. <5% non-plastic fines, light brown.			
15	S5	26-27 30-33	2	1.0	SAND WITH GRAVEL (SP) Narrowly graded. Mostly medium sand, 30% fine angular to subangular gravel, <5% non-plastic fines, light brown.		SAND AND SAND WITH GRAVEL	
20	S6	22-24 22-35	2	0.9	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, light brown.			
25	S7	25-24 25-33	2	0.7	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, light brown.			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Soil sample collected from 5'-7' for asbestos analysis. Cased (drive) wash boring.
	Broad Street Parkway

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 Project 98217

BORING LOCATION <u>651+10 40N</u>					DATE START - FINISH <u>8/11/98-8/12/98</u>			B1002	
GROUND ELEVATION <u>159.4</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>				
GROUND WATER EL. <u> </u> DATE <u> </u>					LOGGED BY <u>Brian F. Jankauskas</u>			TOTAL DEPTH (Ft.) <u>81.7</u>	
Page 2 of 3									

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
30	S8	26-33 37-40	2	1.0	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, light brown.			
35	S9	18-23 30-49	2	0.9	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, light brown.			
40	S10	14-21 29-35	2	0.9	SAND WITH SILT (SP-SM) Narrowly graded. Mostly fine sand. ~10% non-plastic fines, light brown.			
45	S11	15-22 38-32	2	1.1	Similar to S10.		SAND AND SAND WITH SILT	
50	S12	14-14 15-16	2	1.5	Similar to S10.			
55	S13	11-12 12-14	2	1.6	Similar to S10.			
60								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center; padding-top: 10px;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>651+10.40N</u>				DATE START - FINISH <u>8/11/98-8/12/98</u>		B1002	
GROUND ELEVATION <u>159.4</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>81.7</u>	
Page 3 of 3							

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
60	S14	14-14 13-13	2	1.6	Similar to S10.		SAND WITH SILT	
65	S15	13-20 22-22	2	0.9	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown.		SAND	
70	S16	10-12 16-22	2	1.2	SAND (SP) Narrowly graded. Mostly fine sand. <5% non-plastic fines, brown.			
75	S17	14-18 18-25	2	0.9	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine sand ~10% coarse sand, 20% subangular gravel, 5% non-plastic fines, light brown.		SAND WITH GRAVEL	
80	S18	15-13 68- 76/0.3	1.7	1.2	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 20% subangular to angular gravel, 5% non-plastic fines, light brown. (Weathered gravel in tip of spoon similar to bedrock sample from B1001.) 81.7'			
					Bottom of Boring 81.7'			
85								
90								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center; padding-top: 10px;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION: Sta 652+00 33N
GROUND ELEV. (NGVD): 153.2'
START / FINISH DATE: 05/01/01
GW DEPTH / ELEV.: 128.7'
GW DATE / TIME: 05/01/01 (10:00)

TOTAL DEPTH: 42.0'
SOIL BORING: 42.0'
ROCK CORE: 0.0'
DRILLED BY: MTB
LOGGED BY: ALS

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN O.D. SPLIT SPOON SAMPLER
NM - NOT MEASURED
PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC - RECOVERY LENGTH OF SAMPLE
RQO - LENGTH OF SOUND CORES > 4 IN. / LENGTH CORED, (%)

S - SPLIT SPOON SAMPLE		
A - AUGER SAMPLE		- MEASURED GWL
U - UNDISTURBED SAMPLE		
UF - UNDISTURBED SAMPLE, FIXED PISTON		- ESTIMATED GWL
UO - UNDISTURBED SAMPLE, OSTERBERG		

NOTES:

[illegible]

BORING LOCATION: Sta 652+00 33N
GROUND ELEV. (NGVD): 153.2'
START / FINISH DATE: 05/01/01
GW DEPTH / ELEV.: 128.7'
GW DATE / TIME: 05/01/01 (10:00)

TOTAL DEPTH: 42.0'
SOIL BORING: 42.0'
ROCK CORE: 0.0'
DRILLED BY: MTB
LOGGED BY: ALS

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN O.D. SPLIT
 SPOON SAMPLER
 NM - NOT MEASURED
 PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 REC - RECOVERY LENGTH OF SAMPLE
 RQD - LENGTH OF SOUND CORES > 4 IN. / LENGTH CORED, (%)

S - SPLIT SPOON SAMPLE		
A - AUGER SAMPLE	☞	- MEASURED GWL
U - UNDISTURBED SAMPLE		
UF - UNDISTURBED SAMPLE, FIXED PISTON	☞	- ESTIMATED GWL
UO - UNDISTURBED SAMPLE, OSTERBERG		

NOTES:

[illegible]

BORING LOCATION: Sta 653 +57 6S

GROUND ELEV. (NGVD): 169.3'

START / FINISH DATE: 03/08/01

GW DEPTH / ELEV.:

GW DATE / TIME:

TOTAL DEPTH: 62'

SOIL BORING: 62'

ROCK CORE: 0'

DRILLED BY: MTB

LOGGED BY: CSM

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN O.D. SPLIT SPOON SAMPLER

NM - NOT MEASURED

PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC - RECOVERY LENGTH OF SAMPLE

ROD - LENGTH OF SOUND CORES > 4 IN. / LENGTH CORED, (%)

S - SPLIT SPOON SAMPLE

A - AUGER SAMPLE

U - UNDISTURBED SAMPLE

UF - UNDISTURBED SAMPLE, FIXED PISTON

UO - UNDISTURBED SAMPLE, OSTERBERG

 - MEASURED GWL - ESTIMATED GWL

NOTES: Groundwater measured after casing pulled from borehole.

ELEV. (ft)	DEPTH (ft)	TYPE and NUMBER	SPT N per 6 in	PEN (in)	REC (in)	REMARKS	GWL	LITH.	USCS SOIL AND ROCK DESCRIPTIONS	STRATA CHANGE	WELL
-40		S9	23 25 27 28	24	13				(S9)(SP) NARROWLY GRADED SAND: Stratified fine sand, ~5% nonplastic fines, light brown, orange laminae.		
-45		S10	17 20 21 20	24	13				(S10) (SP) Similar to S9.		
-50		S11	14 23 25 30	24	12				(S11) (SP) Similar to S9.		
-55		S12	15 25 27 34	24	12				(S12) (SP) Similar to S9.		
-60		S13	24 44 54 71	24	13				(S13) (SP) Similar to S9.		
-65						B.O.B.			Boring terminated at 62'.		

BORING LOCATION <u>538+51 S 70</u>				DATE START - FINISH <u>8/3/98 - 8/3/98</u>				B1201	
GROUND ELEVATION <u>173.2</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>41.9</u>	
		Page 1 of 2							

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO	BLOWS / 6 IN	PEN #	REC #				
0	S1	4-15 39-53	2	0.9	Upper 0.4' - TOPSOIL Lower 0.5' - GRAVEL WITH SAND (GW) Widely graded. Mostly fine to coarse, rounded to subrounded gravel, 40% fine to coarse sand, 5% non-plastic fines, brown.		TOPSOIL	Gravel lodged in tip of spoon.
5	S2	3-4 6-6	2	0.7	SAND (SW) Widely graded. Mostly fine to medium sand, 5% fine gravel, <5% non-plastic fines.			
10	S3	9-13 12-9	2	0.4	GRAVEL WITH SAND (GW) Widely graded. Mostly fine to coarse gravel, 35% fine to coarse sand, <5% non-plastic fines, brown.			
15	S4	20-10 9-9	2	0.6	SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand, 40% fine to coarse gravel, <5% non-plastic fines, brown.		SAND AND SAND WITH GRAVEL	
20	S5	19-17 16-17	2	0.5	SAND WITH GRAVEL (SW). Widely graded. Mostly fine to medium sand, ~20% fine gravel, <5% non-plastic fines, brown.			
25	S6	29-38 43-41	2	0.8	GRAVEL WITH SAND (GW) Widely graded. Mostly fine to coarse gravel, ~40% fine to coarse sand ~5% non-plastic fines, brown.			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED. % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V- GROUND WATER	Notes: Cased (drive) wash boring. <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>538+51 S 70</u>				DATE START - FINISH <u>8/3/98 - 8/3/98</u>		B1201			
GROUND ELEVATION <u>173.2</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>					
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>41.9</u>			
DEPTH FT.		SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TEST	STRATUM DESCRIP.	Remarks
		TYPE & NO.	BLOWS 6 IN.	PEN R	REC R				
30	S7	16-17 21-29	2	0.8	SAND (SW) Widely graded. Mostly fine to medium sand. <5% non-plastic fines, brown, bottom 0.2' is orange.				
35	S8	32-32 35-34	2	0.7	SAND (SP) Narrowly graded. Mostly fine sand, ~5% non-plastic fines, brown.				
40	S9	32-37 95-110 /0.4	1.9	1.0	SAND (SP). Similar to S8.				
					41.9'				
					Bottom of Boring at 41.9'				
45									
50									
55									
60									
BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS PEN-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER						Notes:			
						Broad Street Parkway			

BORING LOCATION <u>538+28 S 65</u>					DATE START - FINISH <u>7/30/98 - 7/31/98</u>		B1202 Page 1 of 3	
GROUND ELEVATION <u>172.6</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. <u> </u> DATE <u> </u>					LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>70.0</u>	

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
0	S1	5-10 17-14	2	1.2	Upper 0.3' TOP SOIL 0.3' Middle 0.5' SAND WITH GRAVEL (SW) Widely graded. Mostly fine to coarse sand with sub-angular and angular gravel. <5% non-plastic fines, brown. Lower 0.4' SAND (SW) Widely graded. Mostly fine to coarse sand, <5% non-plastic fines, brown. Cobble from about 4' to 4.4'.		TOPSOIL	
5	S2	11-14 15-14	2	0.9	SAND WITH GRAVEL (SW) Widely graded. Mostly medium to coarse sand with fine subrounded to angular gravel, <5% non-plastic fines, brown.			
10	S3	10-24 19-13	2	1	Upper 0.5' SILT (ML) Non-plastic fines, 10% fine rounded to subrounded gravel. Maximum size 1/2". Lower 0.5' SAND (SW) Widely graded. Mostly medium to coarse sand, <5% non-plastic fines, gray.			
15	S4	11-12 14-21	2	0.8	SAND WITH GRAVEL (SW) Widely graded. Mostly medium to coarse sand, 40% fine gravel, <5% non-plastic fines, gray-brown.		SAND AND SAND WITH GRAVEL	
20	S5	26-31 59-38/ 0.2	1.7	1	SAND WITH GRAVEL (SP) Narrowly graded. Mostly medium to coarse sand, 25% fine sub-angular to sub-rounded gravel, <5% non-plastic fines, grey. Boulder 21.5 to 24'			Fractured gravel in tip of spoon.
25	S6	47-40 34-50/0.3	1.8	0.9	SAND WITH GRAVEL (SW) Widely graded. Mostly medium to coarse sand, 40% fine gravel, <5% non-plastic fines, gray-brown. Cobble 26.5 to 27'			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED. % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <input checked="" type="checkbox"/> GROUND WATER	Notes: Cased (driven) wash boring. <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION <u>538+28 S 65</u> GROUND ELEVATION <u>172.6</u> DATUM <u>NGVD</u> GROUND WATER EL. <u> </u> DATE <u> </u>				DATE START - FINISH <u>7/30/98 - 7/31/98</u> DRILLED BY <u>Maine Test Boring</u> LOGGED BY <u>Brian F. Jankauskas</u>				B1202 Page 2 of 3	
TOTAL DEPTH (Ft.) <u>70.0</u>									
DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks	
	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.					
30	S7	23-24 32-37	2	0.7	Upper 0.6' SAND WITH GRAVEL (SW) Widely graded. Mostly medium to coarse sand, 40% fine angular gravel, <5% non-plastic fines, gray-brown. Lower 0.1' SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown.				
35	S8	44-66 90	1.5	0.8	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, <5% fine gravel, brown.				
40	S9	48-80 90	1.5	0.8	SAND WITH GRAVEL (SW) Widely graded. Mostly medium to coarse sand, ~15% fine angular gravel, <5% non-plastic fines, gray/brown.				
45	S10	66-59 84-52	2	0.9	SAND WITH GRAVEL (SW) Widely graded. Mostly medium to coarse sand, 20% fine sub-angular gravel, 10% coarse gravel, <5% non-plastic fines, brown.		SAND AND SAND WITH GRAVEL		
50	S11	31-35 36-35	2	0.7	SAND WITH GRAVEL (SW) Widely graded. Mostly medium to coarse sand, 35% fine sub-angular gravel, <5% non-plastic fines, brown.				
55	S12	41-27 34-33	2	0.7	GRAVEL WITH SAND (GW) Widely graded. Mostly fine to coarse angular gravel, 25% sand, <5% non-plastic fines, gray/brown.				
60									
BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER						Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>			

BORING LOCATION 538+28 S 65
GROUND ELEVATION 172.6 DATUM NGVD
GROUND WATER EL. _____ DATE _____

DATE START - FINISH 7/30/98 - 7/31/98
DRILLED BY Maine Test Boring
LOGGED BY Brian F. Jankauskas

TOTAL DEPTH
(Ft.) 70.0

B1202

Page 3 of 3

DEPTH FT	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS ¹⁾	STRATUM DESCRIP.	Remarks
	TYPE & NO	BLOWS & IN	PEN ft	REC ft				
60	S13	17-30 55-49	2	0.9	Upper 0.5' SAND (SP) Narrowly graded. Mostly fine sand, 5% fine to coarse gravel, <5% fines, brown. Lower 0.4' GRAVEL WITH SAND (GW) Widely graded. Mostly angular fine gravel, 15% fine to coarse sand, <5% non-plastic fines, grey to orange.			
65	S14	34-57 45-38	2	0.8	GRAVEL WITH SAND (GW) Widely graded. Mostly fine angular gravel, 15% sand, <5% non-plastic fines gray/brown.			
70					70.0'			
					Bottom of Boring 70.0'			
75								
80								
85								
90								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A
2.0 IN. OD SPLIT SPOON SAMPLER
WOH-WEIGHT OF RODS
WOH-WEIGHT OF RODS AND HAMMER
PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC-LENGTH OF RECOVERED SAMPLE
RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED. %
S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER
U-UNDISTURBED SAMPLE V GROUND WATER

Notes:

Broad Street Parkway

Φ GEI Consultants, Inc.
Project 98217

BORING LOCATION <u>538+40 N 22</u>					DATE START - FINISH <u>8/4/98 - 8/4/98</u>		B1203	
GROUND ELEVATION <u>170.5</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. _____ DATE _____					LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>32.0</u>	
Page 1 of 2								

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN #	REC #				
0	S1	4-5 9-10	2	0.9	Upper 0.4' TOPSOIL Lower 0.5' SAND (SW) Widely graded. Mostly fine to coarse sand, <5% non-plastic fines, brown to orange with lenses of black-stained soil. FILL.		TOPSOIL	
5	S2	2-2 1-1	2	0.5	GRAVEL WITH SAND (GP) Narrowly graded. Mostly fine to coarse angular gravel, 35% fine sand, <10% non-plastic fines, gray/white. FILL.		FILL	
10	S3	8-6 7-6	2	0	No recovery. Sample S4 driven at same depth. See Note 2.			
	S4	Note 2	2	0.5	SAND WITH GRAVEL (SP) Narrowly graded. Mostly medium sand, 35% gravel, ~5% non-plastic fines, brown. Lower 0.1 is stained black. FILL.			
15	S5	5-6 7-7	2	0.9	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, light brown.		SAND AND SAND WITH SILT	
20	S6	13-15 15-19	2	1.1	SAND WITH SILT (SP-SM) Narrowly graded. Mostly fine sand, ~10% non-plastic fines, gray.			
25	S7	21-24 23-25	2	0.7	Similar to S6.			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE U- GROUND WATER	Notes: 1) Cased (driven) wash boring. 2) Sample S3 driven from 10' to 12'. Sample S4 driven from 11' to 13' to obtain a sample for classification (blow counts disregarded).
Broad Street Parkway	Φ GEI Consultants, Inc. Project 98217

BORING LOCATION <u>538+40 N 22</u>				DATE START - FINISH <u>8/4/98 - 8/4/98</u>				B1203		
GROUND ELEVATION <u>170.5</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>						
GROUND WATER EL. _____ DATE _____				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (Ft.) <u>32.0</u>		
DEPTH		SAMPLE				SOIL AND ROCK DESCRIPTIONS		FIELD TESTS	STRATUM DESCRIP.	Remarks
FT.	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.						
30	S8	18-22 29-33	2	1.1	SAND (SP) Narrowly graded. Mostly fine sand, 5% non-plastic fines, gray.					
					Bottom of Boring 32.0					
<div> <div> BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED. % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER </div> <div> Notes: </div> </div>										
Broad Street Parkway								GEI Consultants, Inc. Project 98217		

BORING LOCATION <u>538+35 N 145</u>				DATE START - FINISH <u>8/4/98 - 8/4/98</u>		B1204	
GROUND ELEVATION <u>170.6</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>		Page 1 of 2	
GROUND WATER EL. <u><136.1</u> DATE <u>11/19/98</u>				LOGGED BY <u>Brian F. Jankauskas</u>			
				TOTAL DEPTH (Ft.) <u>37.0</u>			

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TEST	STRATUM DESCRIP.	EQUIPMENT INSTALLATION
	TYPE & NO.	BLOWS / 6 IN.	PEN in	REC in				
0	S1	1-3 3-4	2	0.6	Upper 0.3' TOPSOIL Lower 0.3' SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, light brown, roots.	0.3'	TOPSOIL	Standpipe installed in concrete surface seal (2.9' stickup)
5	S2	7-7 8-9	2	0.8	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, orange and gray layers, alternating at uneven intervals.		SAND AND SAND WITH SILT	1 1/2" ID PVC well installed
10	S3	7-7 9-9	2	0.7	Similar to S2. Lower 0.3' of sample is gray.			Filler sand from 0.8' to 20.8'
15	S4	12-13 14-17	2	0.8	SAND WITH SILT (SP-SM) Narrowly graded. Mostly fine sand, ~10% non-plastic fines, gray.			
20	S5	10-14 18-22	2	0.8	Upper 0.5' SAND (SP) Similar to S2. Lower 0.3' SAND WITH SILT (SP-SM) Similar to S4.			
25	S6	16-17 20-26	2	0.8	SAND (SP) and SAND WITH SILT (SP-SM) Similar to S2 and S4, respectively, in 0.1' to 0.3'-thick layers.			Bentonite seal from 20.8' to 23.4'
30								Filler sand installed from 23.4' to 35.2'
								1.5" ID slotted PVC screen from 24.5' to 34.5'

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V- GROUND WATER	Notes: Cased (drive) wash boring.
	Broad Street Parkway

Φ GEI Consultants, Inc.
 Project 98217

BORING LOCATION <u>538+35 N 145</u>					DATE START - FINISH <u>8/4/98 - 8/4/98</u>		B1204	
GROUND ELEVATION <u>170.6</u> DATUM <u>NGVD</u>					DRILLED BY <u>Maine Test Boring</u>		TOTAL DEPTH (Ft.) <u>37.0</u>	
GROUND WATER EL. _____ DATE _____					LOGGED BY <u>Brian F. Jankauskas</u>		Page 2 of 2	
DEPTH	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	EQUIPMENT INSTALLATION
FT.	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.				
30	S7	14-19 25-25	2	0.9	SAND WITH SILT (SP-SM) Narrowly graded. Mostly fine sand, ~10% non-plastic fines, gray with orange layers.			1.5" ID slotted PVC screen from 24.5' to 34.5'
35	S8	18-26 26-28	2	0.7	SILTY SAND (SM-SW) Narrowly graded. Mostly fine sand, 20% non-plastic fines.			Boring collapsed from 35.2' to 37'.
	Bottom of Boring 37.0'							
40								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A
 2.0 IN. OD SPLIT SPOON SAMPLER
 WOR-WEIGHT OF RODS
 WOH-WEIGHT OF RODS AND HAMMER
 PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 REC-LENGTH OF RECOVERED SAMPLE
 RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, %
 S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER
 U-UNDISTURBED SAMPLE V GROUND WATER

Notes:

Broad Street Parkway

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 Project 98217

BORING LOCATION 538+61 N 134
GROUND ELEVATION 171.0 DATUM NGVD
GROUND WATER EL. _____ DATE _____

DATE START - FINISH 8/4/98 - 8/4/98
DRILLED BY Maine Test Boring
LOGGED BY Brian F. Jankauskas

TOTAL DEPTH
(Ft.) 32.0

B1205

Page 1 of 2

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TEST	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.				
0	S1	1-1 1-2	2	0.6	SAND (SW) Widely graded. Mostly fine to coarse sand, ~10% fine gravel, <5% non-plastic fines, light to dark brown. FILL.			
5	S2	3-4 2-4	2	0.8	Upper 0.6' - Organic Sand. Remnant topsoil layer. Lower 0.2' SAND (SP) Narrowly graded. Mostly fine sand, <10% non-plastic fines, light brown. FILL.		FILL	
10	S3	8-7 9-11	2	0.7	SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~20% non-plastic fines, light brown, brown, and orange layers.			
15	S4	11-11 13-19	2	0.8	Similar to S3.		SILTY SAND AND SAND WITH SILT	
20	S5	11-14 13-17	2	0.8	Similar to S3.			
25	S6	15-17 23-23	2	0.8	Similar to S3.			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A
2.0 IN. OD SPLIT SPOON SAMPLER
WOH-WEIGHT OF RODS
WOH-WEIGHT OF RODS AND HAMMER
PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC-LENGTH OF RECOVERED SAMPLE
RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, %
S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER
U-UNDISTURBED SAMPLE V GROUND WATER

Notes:

Cased (drive) wash boring.

Broad Street Parkway

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[illegible]

BORING LOCATION <u>211+00; Rt 31'</u>		DATE START - FINISH <u>11/12/98-11/12/98</u>		B1401	
GROUND ELEVATION <u>157.7</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. <u> </u> DATE <u> </u>		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>22.0</u>	
Page 1 of 1					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.				
	S1	2-1 2-1	2	1.0	Upper 0.4' - TOPSOIL		TOPSOIL	
					Lower 0.6' - SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, yellow brown, roots.			
5	S2	1-2 3-5	2	1.2	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown.		SAND	
10	S3	5-6 8-9	2	0.8	SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown.			
15	S4	10-11 14-20	2	0.8	SAND WITH SILT (SP-SM) Narrowly graded. Mostly fine sand, 10% non-plastic fines, gray.		SAND WITH SILT	
20	S5	12-13 16-17	2	0.9	SAND WITH SILT (SP-SM) Narrowly graded. Mostly fine sand, 10% non-plastic fines, gray.			
					Bottom of boring 22.0'			
25								
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Auger 0' to 5' Case (driven) wash 5' to 22'
Broad Street Parkway	
GEI Consultants, Inc. Project 98217	

BORING LOCATION <u>212+19 W 34</u>		DATE START - FINISH <u>11/12/98-11/12/98</u>		B1501	
GROUND ELEVATION <u>149.7</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>		Page 1 of 2	
GROUND WATER EL. <u>123.0</u> DATE <u>11/19/98</u>		LOGGED BY <u>Brian F. Jankauskas</u>			
		TOTAL DEPTH (Ft.) <u>32.0</u>			

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN #	REC #				
	S1	2-3	2	1.3	Upper 0.3' - TOPSOIL	0.5'	TOPSOIL	Roadbox installed in 1' thick concrete surface seal
		2-3			Middle 0.5' - SAND (SP) Narrowly graded. Mostly fine sand, 5% non-plastic fines, brown, FILL. Lower 0.5' - SAND (SP) Narrowly graded. Mostly fine sand, 5% ash, 5% non-plastic fines, black with red lense, FILL.		FILL	
5	S2	1-1	2	1.6	Upper 1.1' - SAND (SP) Narrowly graded, Mostly fine sand, 5% ash, <5% non-plastic fines, black, FILL.	6'		1 1/2" ID PVC riser from 0' to 20'
		1-2			Lower 0.5' - SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown.			
10	S3	3-4 4-5	2	0.8	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown.			Cuttings from 1' to 15'
15	S4	7-11 13-16	2	0.5	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown.		SAND	Bentonite seal from 15' to 18'
20	S5	8-15 15-19	2	0.9	SAND (SP) Narrowly graded. Mostly fine sand, <5% non-plastic fines, brown.			Filter sand from 18' to 30'
25	S6	14-10	2	0.6	SAND (SP) Narrowly graded. Mostly fine to medium sand, 5% fine angular gravel, <5% non-plastic fines, brown.			1 1/2" ID PVC well screen from 20' to 30'
		12-16						
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <u> </u> GROUND WATER	Notes: Auger 0' to 5' Case (driven) wash 5' to 32'
	Broad Street Parkway

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BORING LOCATION <u>212+19 W 44</u>				DATE START - FINISH <u>11/12/98-11/12/98</u>		1501	
GROUND ELEVATION <u>149.7</u>		DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. <u>123.0</u>		DATE <u>11/19/98</u>		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>32.0</u>	
Page 2 of 2							

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.				
30	S7	8-8	2	1.2	Upper 0.9' - SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown.		SAND	
		13-17		Middle 0.2' - SILTY SAND (SM) Narrowly graded. Mostly fine sand, ~30% non-plastic fines, gray.				
				Lower 0.1' - Similar to Upper 0.9'				
					32.0'			
					Bottom of Boring 32.0'			
35								
40								
45								
50								
55								
60								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <input checked="" type="checkbox"/> GROUND WATER	Notes:
	Broad Street Parkway
	© GEI Consultants, Inc. Project 98217

BORING LOCATION <u>212+92 W 59</u>		DATE START - FINISH <u>11/12/98-11/12/98</u>		B1502	
GROUND ELEVATION <u>144.0</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>		TOTAL DEPTH (Ft.) <u>27.0</u>	
GROUND WATER EL. _____ DATE _____		LOGGED BY <u>Brian F. Jankauskas</u>			
Page 1 of 1					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN R.	REC R.				
	S1	2-1	2	1.8	Upper 1.0' - TOPSOIL		TOPSOIL	
		2-3						
					Lower 0.8' - SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown.			
5	S2	3-3 3-4	2	1.5	SAND (SP) Narrowly graded. Mostly fine to medium sand, 5% non-plastic fines, brown with orange.		SAND	
10	S3	7-10 12-13	2	0.7	Similar to S2, but brown			
15	S4	11-10 11-16	2	1.0	Upper 0.8' - SAND (SP) Narrowly graded. Mostly fine to medium sand, <5% non-plastic fines, brown. Lower 0.2' - SAND (SP) Narrowly graded. Mostly fine sand, 5% non-plastic fines, brown.			
20	S5	30-23 16-19	2	0.7	SAND WITH GRAVEL (SP) Narrowly graded. Mostly fine to medium sand, 20% rounded gravel, 5% non-plastic fines, brown.			
25	S6	10-8 10-12	2	0.3	SAND WITH GRAVEL (SP) Widely graded. Mostly fine to coarse sand, 25% rounded gravel, <5% non-plastic fines, brown.			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V GROUND WATER	Notes: Auger 0' to 5' Case (driven) wash boring 5' to 27'
	Broad Street Parkway
	GEI Consultants, Inc. Project 98217

BORING LOCATION <u>512+12 R 66</u>		DATE START - FINISH <u>7/23/98- 7/24/98</u>		B1901	
GROUND ELEVATION <u>169.5</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>		Page 1 of 3	
GROUND WATER EL. _____ DATE _____		LOGGED BY <u>Brian F. Jankauskas</u>			
		TOTAL DEPTH (Ft.) <u>72.1</u>			

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN q.	REC q.				
0	S1	1-2 2-2	2	1.4	Upper 0.8' TOP SOIL Lower 0.6' SAND (SW) Widely graded. Mostly fine to medium sand, brown, <5% fines.		TOPSOIL	
5	S2	5-5 4-6	2	0.8	SAND (SP) Narrowly graded. Mostly fine sand, 5-10% coarse sand, 5% rounded coarse gravel, <5% fines, gray-brown.		SAND AND SAND WITH GRAVEL	
10	S3	12-8 9-9	2	0.9	SAND (SP) Narrowly graded. Similar to above. Coarse sand located in the upper 0.2' of sample.			
15	S4	7-7 12-14	2	0.0	No recovery.			
	S5	10-13 -17	1.5	1.1	Upper 0.5' SAND (SP) Narrowly graded. Mostly fine sand. <5% fines, light gray-brown when wet. Lower 0.6' SAND (SW) Widely graded. Mostly fine to medium sand, <5% fines, gray-brown when wet.			
20	S6	19-17 21-19	2	0.8	SAND (SW) Widely graded. Mostly fine to coarse sand, 5% rounded gravel, <5% fines, brown with an orange layer ~2" thick.			
25	S7	23-30 39-39	2	0.4	SAND WITH GRAVEL (SW) Widely graded. Mostly medium to coarse sand, 15% rounded to angular fine gravel. <5% fines, brown.			
30								

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOR-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <input checked="" type="checkbox"/> GROUND WATER	Notes: Cased (driven) wash boring. 53.4' to ground water on completion of boring.
Broad Street Parkway	
GEI Consultants, Inc. Project 98217	

BORING LOCATION <u>512+12 R 66</u>		DATE START - FINISH <u>7/23/98- 7/24/98</u>		B1901	
GROUND ELEVATION <u>169.5</u> DATUM <u>NGVD</u>		DRILLED BY <u>Maine Test Boring</u>			
GROUND WATER EL. _____ DATE _____		LOGGED BY <u>Brian F. Jankauskas</u>		TOTAL DEPTH (Ft.) <u>72.1</u>	
Page 2 of 3					

DEPTH FT.	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks
	TYPE & NO.	BLOWS / 6 IN.	PEN #	REC #				
30	S8	20-18 16-17	2	0.5	SAND WITH GRAVEL (SW) Widely graded. Mostly medium to coarse sand, ~15% rounded to sub-angular gravel, <5% non-plastic fines, brown.			
35	S9	18-28 36-24	2	0.7	SAND WITH GRAVEL (SW). Similar to S8.			
40	S10	22-26 26-34	2	0.8	SAND (SW). Widely graded. Mostly medium to coarse sand, 5% fine gravel, <5% non-plastic fines, brown.			
45	S11	18-17 19-20	2	0.2	SAND WITH GRAVEL (SW). Similar to S8.			
50	S12	12-13 17-21	2	0.0	No recovery.			
55	S13	18-25 28-34	2	1.0	Upper 0.9' SAND (SP). Narrowly graded. Mostly fine sand, <5% non-plastic fines, light brown with orange discoloring at 0.6'. 53.5'			
	S14	22-22 29-30	2	0.9	Lower 0.1' SILT WITH SAND (ML). Rapid dilatancy, low toughness, non-plastic, 20% fine sand, gray-brown. SILT (ML) Rapid dilatancy, low toughness, non-plastic, 10% fine sand, gray-brown. ~58.5'		SILT	
60								

BLOWS PER 6 IN - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED, % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE <input checked="" type="checkbox"/> GROUND WATER	Notes: <div style="display: flex; justify-content: space-between; align-items: center;"> Broad Street Parkway Φ GEI Consultants, Inc. Project 98217 </div>
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BORING LOCATION 512+12 R 66				DATE START - FINISH 7/23/98- 7/24/98				B1901	
GROUND ELEVATION 169.5				DATUM NGVD				DRILLED BY Maine Test Boring	
GROUND WATER EL.				DATE				LOGGED BY Brian F. Jankauskas	
				TOTAL DEPTH (Ft.) 72.1				Page 3 of 3	
DEPTH	SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks	
FT.	TYPE & NO.	BLOWS / 6 IN.	PEN ft.	REC ft.					
60	S15	27-25	1.8	1.5	GRAVEL WITH SILT (GW-GM) SAND WITH SILT (SP-SM) and SILT (SM) in layers between 0.2' and 0.5' thick.		GLACIAL TILL		
60.5		48-							
62.5		50/0.3'							
64.3					64.3'				
65	R1	13 min			META SEDIMENTARY.				
		10 min	4.3	4.3	Slightly weathered to fresh with fractures dipping at 0, 15, 30, 60, and 90 degrees from horizontal				
		7 min			Fractures are spaced from 2" to 9" apart. RQD=52%				
		9 min			A vertical fracture extends through 2/3's of the core		BEDROCK		
		23min/0.3			All water lost during coring past about 67'.				
68.6	R2	9 min			META SEDIMENTARY.				
70		7 min	3.5	3.5	Slightly weathered to fresh with fractures dipping at 0, 60, and 75 degrees from the horizontal. Fractures are spaced from 1" to 16" apart. RQD=48%.				
		10min							
72.1		21 min /0.5			72.1'				
					Bottom of Boring 72.1'				
75									
80									
85									
90									

BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A
 2.0 IN. OD SPLIT SPOON SAMPLER
 WOH-WEIGHT OF RODS
 WOH-WEIGHT OF RODS AND HAMMER
 PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 REC-LENGTH OF RECOVERED SAMPLE
 RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED. %
 S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER
 U-UNDISTURBED SAMPLE V GROUND WATER

Notes:

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BORING LOCATION <u>511+44 R 34</u>				DATE START - FINISH <u>8/26/98-8/26/98</u>				B1902		
GROUND ELEVATION <u>141.5</u> DATUM <u>NGVD</u>				DRILLED BY <u>Maine Test Boring</u>						
GROUND WATER EL. <u> </u> DATE <u> </u>				LOGGED BY <u>Brian F. Jankauskas</u>				TOTAL DEPTH (FL) <u>65.2</u>		
DEPTH FT.		SAMPLE				SOIL AND ROCK DESCRIPTIONS	FIELD TESTS	STRATUM DESCRIP.	Remarks	
		TYPE S NO	BLOWS / 6 IN	PEN n	REC n					
0	S1	WOH -1 0-1	2	0.8	SAND (SP) Narrowly graded. Mostly fine sand, ~5% non-plastic fines, brown. FILL.				FILL	
5	S2	4-4 4-5	2	0.4						
10	S3	7-5 5-5	2	0.7	SAND (SP) Narrowly graded. Mostly medium sand, <5% non-plastic fines, brown.				SAND AND SAND WITH GRAVEL	
15	S4	10-9 13-13	2	0.6						
20	S5	10-9 11-11	2	0.4	SAND WITH GRAVEL (SP) Narrowly graded. Mostly medium sand, ~20% angular fine gravel, <5% non-plastic fines, brown.					
25	S6	10-11 13-12	2	0.2						
30					SAND WITH GRAVEL (SP) Narrowly graded. Mostly medium sand, ~30% subangular fine gravel, ~5% non-plastic fines, brown.					
BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE A 2.0 IN. OD SPLIT SPOON SAMPLER WOH-WEIGHT OF RODS WOH-WEIGHT OF RODS AND HAMMER PEN-PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC-LENGTH OF RECOVERED SAMPLE RQD-LENGTH OF SOUND CORE SECTIONS > 4 IN./LENGTH CORED. % S-SPLIT SPOON SAMPLE Sv-TORVANE Qp-PENETROMETER U-UNDISTURBED SAMPLE V- GROUND WATER						Notes: Cased (drive) wash boring.				
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